

## Appendix C: Subcommittee Summaries

### Municipal Subcommittee

#### *Municipal Budget Overview*

The Brookline budget is largely driven by personnel expense: salaries and benefits. A substantial portion of operating expense is for contractual health and retirement benefits. The Town is primarily a service provider for public safety and public education. School related expenses count for nearly 58% of the operating budget. Public Safety and other non-school departments are about 36%. Debt service, assessments and reserves are about 6%. The drivers in both Town and School budgets are collective bargaining and personnel benefits. The increase in enrollment and classrooms has increased the need for teachers.

The cost of group health insurance is projected to increase 2.5% in FY19. Variable impacts include the final cost for health insurance through the state Group Insurance Commission (GIC) that negotiates with providers for rates. However, the recent decision to restore three health plans that were to be dropped will probably result in a revised, higher estimate. At this time, the Town contributes 83% of the cost for health benefits, while employees pay 17%, compared to similar communities, where the split is 75%/25%. Any change in these ratios must be negotiated through a process with public employee unions.

Total cost of benefits, including group health and retirement, is estimated at \$65 million in FY19 and has been increasing annually by nearly 6.5%. The salary goal is to maintain a 2% cap on annual contractual increases. There is a plan and payment schedule to fully fund the pension system by 2030 and there are also long term obligations to pay for retired employees and their surviving spouses Other Post-Employment Benefits (OPEB).

Any unspent revenue balance from the prior year is certified by the State as Free Cash and allocated according to a Free Cash Policy. The Town follows a set of guidelines for reserves and maintains Fund Balance equal to approximately 10% of revenue in order to maintain a **Aaa** rating for borrowing. There is also a policy that allocates an amount equal to 7.5% of prior year net revenue for Capital Improvements.

The property tax is 70% of local revenue, with about 10% from local receipts and the remaining 20% is a mix of state aid and other funding sources. The revenue forecast shows an FY19 levy increase of \$7,846,911 (2-1/2% +new growth) plus \$4,833,739 of ongoing Debt Service. The second source of revenue is Local Receipts, about \$30 million. While there were decreases in State Aid in FY 15-18, a small increase is anticipated in FY19 for about \$21 million. A combination of other available funds and free cash would bring FY19 operating revenue to about \$285 million, or a 4.3% increase over FY18.

In 1995 voters approved a debt exclusion for the 1998-2000 BHS renovation, which permits the cost of borrowing to be added to the annual levy. This amount will phase out by 2020. However, the Devotion School renovation debt exclusion voted in 2015 will begin in FY19, plus an anticipated new BHS expansion debt exclusion. This could mean a levy increase of 5%, including debt service, compared to 3.6% in FY18, before any operating override amount is included (Attachment 1). The Select Board has

recently set the property tax rate for FY19, including a commercial property tax rate 1.735% higher than the residential rate, as allowed by state statute, and approved a 20% Residential Exemption for owner-occupied residential property.

Certain School expenses are carried in the Town Budget. The Building Dept. Municipal Facilities budget carries a transfer amount from the School Dept. budget to pay for school building utilities, inspections and repairs & maintenance. This is similar to the School employee health benefits expense that is carried in the Town budget. These allocations are made through a process called the Town/School Partnership, an agreement that sets up a formula for sharing revenues. New revenues are allocated 50%/50% and then adjusted for amounts transferred to Town accounts and for School Dept. operations. The final result is reflected in individual departmental budget expenditures. (Attachment 2).

As of December 2017, there was a projected municipal deficit of \$886,000 and a school budget deficit of \$4.5 million in FY19. Updates in January 2018 indicate an increase local state aid and the projected deficits have been reduced. The Town budget could be level-funded with a 2.5% increase; and the School deficit could be reduced to \$3.5 million in FY19.

The Town is moving toward more electronic transactions and electronic billing and payments for all Town fees, property taxes, etc. A variety of payment methods are currently in use that should be consolidated into an integrated system. Currently the Town incurs processing fees of about \$480,000 for credit card, debit card, and electronic check payments annually. The plan is to have the payer assume the cost of processing through introduction of Convenience Fees in FY19 with a savings of \$500,000.

Parking fees & fines are a component of Local Receipts, \$4 million in 2018. In addition to parking meters, there are 12 overnight parking lot locations as well as permitted overnight street parking. Overnight revenue was \$185,302 in FY17. Overnight rates are limited by a court ruling that the fees can only cover the administrative cost of the program. Meter fee collection is up with increasing use of credit cards and phone apps. Meter fees, \$1.25 per hour, were raised two years ago and are comparable with abutting communities.

The current Pay As You Throw (PAYT) refuse program operated by the DPW charges a fee based on the size of the refuse container, while single-stream recycling costs are recovered through a contract that gives the contractor the value of the recycled materials. The total program revenue recovers about 73% of the annual cost (\$2,640,000 in 2017), while the balance is covered by general revenue (\$993,055 in 2017). The recycling program has been growing and a recycling coordinator position has been added this year. The DPW would like to assess efficiencies and expansion before proposing any increase in the fees. Separately, there are concerns about lack of adequate covered DPW equipment storage space, and the need to replace worn-out equipment.

Town Departments have indicated a number of long deferred items totaling \$1.5 million that need to be considered for funding (Attachment 3).

- Senior Center staffing to advise on eligibility for property tax exemptions as property values and taxes increase
- Preservation staffing as LHD's and NCD's have increased property modifications and real estate development projects to review

- Planning staff for energy & sustainability programs
- Building Dept. public facilities staffing and workshop space increase as the volume & complexity of public buildings requiring repairs and maintenance has increased and to implement a catch-up plan
- DPW annual equipment replacement budget increase to keep up with ongoing need for re-paving and snow & ice removal
- Fire Dept. staffing to restore prior reduction and to implement increased code enforcement inspections
- Library staffing for children's services and building management
- Archive staffing to organize document digitizing, required storage and preservation for all Town departments
- Recreation staffing to meet expanded pool hours for exercise programs

In summary, over the next 3 - 5 years, increasing demands for repair and maintenance of public buildings, streets and recreation spaces are predicted. School enrollment increases will need to be addressed with space and staffing. There are 40B housing developments such as Hancock Village that will generate additional school enrollment. Revenue forecasts include several property developments such as the Children's Hospital space on Washington Street, a new hotel on Brookline Avenue that will generate future property taxes.

In the near term, FY 19-21, it seems important to include options for a municipal operating override in order to maintain the historic level of community services.

### *Capacity to Pay*

#### Highlights

- 1) The percent of Brookline Households paying more than 30% of income for housing is very close to that of the state as a whole, save for those aged 65 and over; here it is lower in Brookline for owners and higher for renters.
- 2) Real estate taxes per household relative to income are slightly below those of peer cities and towns.
- 3) Taxes per household relative to housing wealth are well below those of peers.
- 4) Taxes have been rising since 2010 in inflation-adjusted dollars and at about the same rate in Brookline as for peers.
- 5) Income per household, in inflation-adjusted dollars, has been falling in Brookline since 2010 but has been rising for peers.
- 6) Value per housing unit has been rising in inflation-adjusted dollars and at a much more rapid rate than for peers.

7) Brookline's population has been rising in student-age categories and among those 65 and over but has been falling in the prime working-age categories.

8) Brookline's number of homeowners has declined since 2010 and its number of rental households has increased.

The obvious question in any override proposal is the balance between the need for additional money and the ability to pay. The terms "need" and "ability to pay" are both ambiguous. Programs, including both town and school programs, can be provided at different levels, and the more relevant question is how much money is required to maintain programs at a given level of quality. Do we want to be at the top in both municipal programs and in the schools, and if so, how much will it cost? Or would we prefer to settle for "good" rather than "excellent," and if so, how much would that cost?

Ability to pay is highly nuanced. Some residents are stretched very thin already and can barely pay the taxes increasing at 2 1/2 per cent per year, let alone paying more than that. Others could pay more if they were willing to sacrifice something but that something may be as important to them as the difference between "good" and "excellent" town and/or school programs. Others are determined to maintain excellent programs and are willing to cut back elsewhere in order to so. And a few, of course, might be able pay what it takes without any notable difference in their standard of living.

Even those able to pay for a substantial override may well ask whether a yes vote would do more to enhance the value of their properties than would a no vote. This may be a huge factor for owners who are either thinking of leaving Brookline within a few years, and thus contemplating a sale without a local repurchase, or people who intend to stay in their homes but wish to leave a substantial bequest to their heirs. We have no good evidence on whether higher property taxes enhance or depress property values. Higher taxes which enhance services may well increase property values, whereas higher taxes that lead to waste and inefficiency may well reduce values. For Brookline overrides from 1994 to date, it does appear that home prices have risen by more in the two years just prior to and following an override than they have in other years. The data for this is presented later in the report.

There is no easy answer to the question of whether Brookline has the capacity to pay for a substantial override. What we can do is provide data on taxes, incomes, and property values for Brookline and for those communities we have looked to as "peers" in the 2014 override study report and also for a more recent group of school peers as identified by the Brookline School Committee.

### **Housing Costs over 30% of Income**

The 2014 Override Study Committee report included a section called "Capacity to Pay," in which it began with a discussion of how many homeowners and renters paid more than 30% of their incomes in housing costs. This threshold has been commonly used as a measure of whether people are "financially stressed" by housing costs with little left to spend on other goods and services. They found that 30% of owner

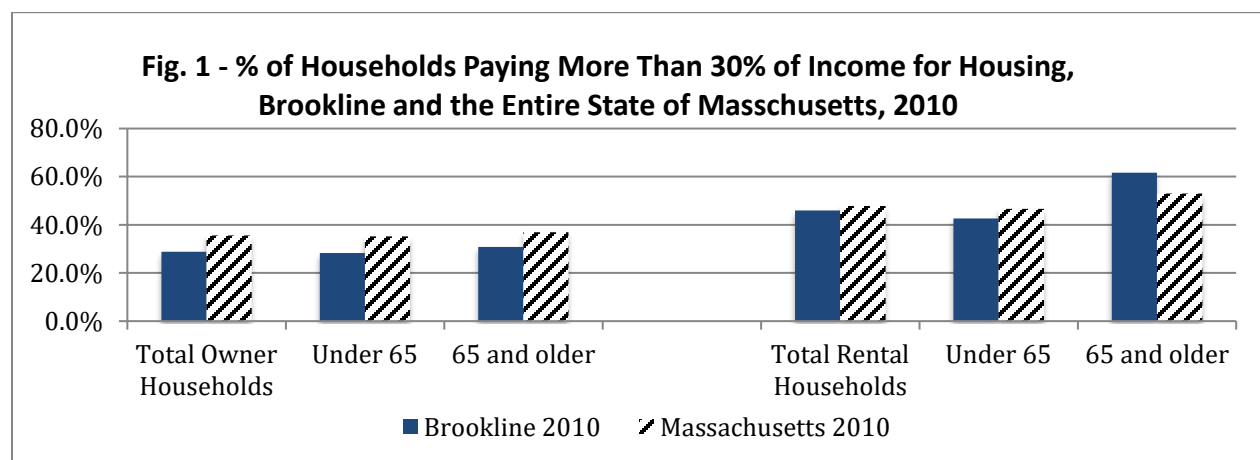
households and about 50% of rental households are cost burdened already, and presumably would find it difficult to bear additional taxes. The report did not give the percentages for other cities or towns in Massachusetts, and it strikes us that this is worth doing.

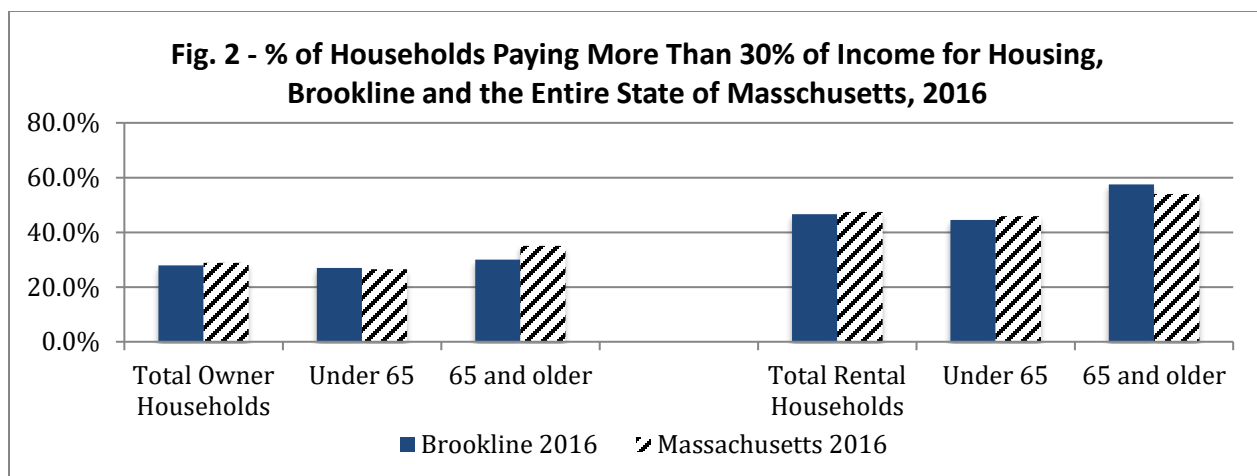
Table 1 gives these percentages for 2010 and 2016 for both Brookline and the entire state of Massachusetts. We see that although the percentages are high in Brookline they are slightly below those for the state as a whole save for elderly rental households (those with a head of household aged 65 and over). Elderly renters appear to be the ones who are most cost-burdened by housing. The percentages are also shown as charts in Figs. 1 and 2, for those who find charts easier to read.

**Table 1 - Percent of Households Paying More than 30% of Income for Housing**

	Brookline 2010	Brookline 2016	Massachusetts 2010	Massachusetts 2016
Total Owner Households	28.8%	27.9%	35.6%	28.90%
Under 65	28.2%	27.0%	35.2%	26.50%
65 and older	30.8%	30.0%	36.9%	35.00%
Total Rental Households	46.0%	46.6%	47.8%	47.40%
Under 65	42.6%	44.5%	46.7%	45.93%
65 and older	61.6%	57.5%	53.0%	54.00%

Source: American Community Survey.





What is most notable in the data is that the proportion of "housing stressed" in 2016 is not notably different in Brookline than in the entire state of Massachusetts. Thus, it is a concern in Brookline as it is throughout the state; Brookline is not unique.

It is a bit puzzling that the percentage of "housing stressed" has gone down in Brookline for the elderly, most particularly for elderly renters, given that rents have been rising rapidly in Brookline as well as throughout the state over the past six years. Table 2 is an effort to provide some insight on this.

**Table 2 - Number of Brookline Households, 2010 and 2016, Total, by Owners vs. Renters, by Age, and by % Housing stressed**

	Total Number			Hous. Costs >30% of Inc.		
	2010	2016	Δ	2010	2016	Δ
Total Number of HHs	24475	24741	266	9127	9251	124
Owners	12395	12184	-211	3570	3399	-171
Renters	12080	12557	477	5557	5852	295
Total under age 65	19634	18960	-674	6974	6961	-13
Owners	9701	8423	-1278	2740	2271	-469
Renters	9933	10537	604	4234	4690	456
Total 65 and over	4841	5781	940	2153	2290	137
Owners	2694	3761	1067	830	1128	298
Renters	2147	2020	-127	1323	1162	-161

Source: American Community Survey

The table shows that over the six years 2010 to 2016 Brookline lost 211 owner-occupied households but gained 477 rental households, for a net increase of 266. This is in line with national data showing a reduction in the percentage of homeowners since the financial crisis. In Brookline this largely reflects an increase in the number of investor-owned condominiums.

Among those 65 and over, however, the number of owners increased substantially and the number of renters fell. It is not quite clear why this has happened, but it is notable that this was the group (renters 65 and over) that was the most "housing stressed" in both 2010 and 2016. It may be that some have been forced out by high rents, or it may be that more of the elderly have chosen to stay in their homes rather than move to rental housing.

### **Taxes and Income, Brookline and Peer Communities.**

It has been the custom in looking at taxes in Brookline to compare ourselves with so-called peer communities. The 2014 Override Study report did this with 11 school peers and 10 municipal peers, which are identified in Table 3. The school peers at that time included a number of towns with much higher incomes than Brookline, including Dover, Weston, Wellesley, and Carlisle. As of Fall, 2017, the School Committee was using a different set of peers, identified in the table as 2017 School Peers. Table 3 gives data for Brookline and all of these peers on taxes and on income.

**Table 3 - Residential Tax Levy per Household Unit and Household Income**

Municipality	2014 Sch. Peer	2014 Mun Peer	2017 Sch. Peer	Res. Levy per HU FY2011	Res. Levy per HU FY2017	%Δ FY11-17	Mean HH Inc. 2010	Mean HH Inc. 2016	%Δ FY10-16
Brookline	x	x	x	5,024	6,373	26.85%	147,140	145,131	-1.37%
Acton			x	7,172	7,994	11.46%	130,786	158,428	21.14%
Arlington		x	x	4,049	5,396	33.27%	101,307	125,046	23.43%
Belmont		x	x	6,330	7,960	25.75%	131,030	157,073	19.88%
Boxborough			x	6,279	6,236	-0.69%	119,845	138,580	15.63%
Cambridge			x	1,966	2,648	34.67%	97,296	119,288	22.60%
Carlisle	x			12,393	13,848	11.74%	189,989	241,742	27.24%
Concord	x			9,073	10,505	15.79%	183,250	192,909	5.27%
Dedham		x		4,660	5,529	18.63%	103,588	114,541	10.57%
Dover	x			13,462	14,904	10.71%	240,516	299,943	24.71%
Framingham		x		3,265	3,766	15.35%	83,730	91,252	8.98%
Lexington	x	x	x	8,287	11,154	34.60%	173,165	197,029	13.78%
Lincoln	x			9,469	10,450	10.36%	174,002	195,926	12.60%
Medford		x		2,700	3,622	34.13%	82,381	97,242	18.04%
Natick		x	x	4,444	5,517	24.15%	112,583	130,005	15.47%
Needham		x	x	6,659	8,727	31.05%	158,686	191,789	20.86%
Newton	x	x	x	6,403	7,968	24.43%	158,916	185,174	16.52%
Sherborn	x			12,869	14,812	15.09%	190,251	216,125	13.60%
Sudbury	x			10,635	11,552	8.62%	183,902	221,434	20.41%
Wayland	x			10,467	11,264	7.62%	185,407	199,541	7.62%

Wellesley	x	x	x	9,767	12,549	28.48%	213,666	264,145	23.63%
Weston	x			15,293	17,542	14.71%	276,835	288,740	4.30%
Winchester			x	7,632	9,959	30.48%	162,211	204,878	26.30%
				FY2011	FY2017	%ΔRes.Levy	2,010	2,016	%ΔMean Income
Brookline				5,024	6,373	26.85%	147,140	145,131	-1.37%
Ave., FY14 School Peers				10,738	12,413	16.56%	197,264	227,519	15.43%
Ave., FY14 Municipal Peers				5,657	7,219	26.98%	131,905	155,330	17.12%
Ave., FY17 School Peers				6,272	7,828	25.24%	141,772	170,130	19.93%
U.S. Cons.Price Index (Dec of FY)				215.9	241.4	11.81%			

Sources of Data: Residential Levy from the Massachusetts Department of Revenue, Municipal Data Bank. Number of Housing Units and Mean and Median Household Income from the American Community Survey, 2016 and 2010.

**Table 3 cont'd - Residential Tax Levy per Household Unit and Household Income**

<b>Municipality</b>	<b>Ave.Levy/ Mean inc FY2011</b>	<b>Ave.Levy/ Mean inc FY2017</b>	<b>Med. HH Inc. 2010</b>	<b>Med. HH Inc. 2016</b>	<b>%Δ FY11- FY17</b>	<b>Ave.Levy/ Med. inc FY2011</b>	<b>Ave.Levy/ Med. inc FY2017</b>
Brookline	3.41%	4.39%	95,448	102,175	7.05%	5.26%	6.24%
Acton	5.48%	5.05%	105,523	131,099	24.24%	6.80%	6.10%
Arlington	4.00%	4.31%	82,771	98,103	18.52%	4.89%	5.50%
Belmont	4.83%	5.07%	95,197	114,141	19.90%	6.65%	6.97%
Boxborough	5.24%	4.50%	102,222	103,556	1.31%	6.14%	6.02%
Cambridge	2.02%	2.22%	64,865	83,122	28.15%	3.03%	3.19%
Carlisle	6.52%	5.73%	155,000	167,400	8.00%	8.00%	8.27%
Concord	4.95%	5.45%	119,858	138,661	15.69%	7.57%	7.58%
Dedham	4.50%	4.83%	80,865	87,108	7.72%	5.76%	6.35%
Dover	5.60%	4.97%	164,583	189,265	15.00%	8.18%	7.87%
Framingham	3.90%	4.13%	64,061	70,706	10.37%	5.10%	5.33%
Lexington	4.79%	5.66%	130,637	152,872	17.02%	6.34%	7.30%
Lincoln	5.44%	5.33%	121,104	130,870	8.06%	7.82%	7.99%
Medford	3.28%	3.72%	70,102	79,607	13.56%	3.85%	4.55%
Natick	3.95%	4.24%	87,568	104,372	19.19%	5.07%	5.29%
Needham	4.20%	4.55%	114,365	139,477	21.96%	5.82%	6.26%
Newton	4.03%	4.30%	107,696	127,402	18.30%	5.95%	6.25%
Sherborn	6.76%	6.85%	145,250	158,250	8.95%	8.86%	9.36%
Sudbury	5.78%	5.22%	153,295	164,013	6.99%	6.94%	7.04%



Wayland	5.65%	5.64%	129,805	157,500	21.34%	8.06%	7.15%
Wellesley	4.57%	4.75%	139,784	171,719	22.85%	6.99%	7.31%
Weston	5.52%	6.08%	148,512	191,744	29.11%	10.30%	9.15%
Winchester	4.71%	4.86%	121,572	149,321	22.83%	6.28%	6.67%
	FY2011	FY2017	2,010	2,016	%ΔMed. Income	FY2011	FY2017
Brookline	3.41%	4.39%	95,448	102,175	7.05%	5.26%	6.24%
Average of							
FY14 Sch. Peers	5.42%	5.45%	137,775	159,063	15.57%	7.73%	7.75%
FY14 Mun. Peers	4.20%	4.56%	97,305	114,551	16.94%	5.64%	6.11%
FY17 Sch. Peers	4.35%	4.50%	104,745	125,017	19.48%	5.81%	6.08%

The table shows the residential levy per household for FY2011 and FY2017, and both mean and median household income for 2010 and 2016. It is presumed that, other things being equal, which they are not, there is a greater capacity to pay with greater income, and a greater capacity to pay with an increase in real income; i.e., income adjusted for the change in the cost of living. The table has a maze of numbers. It might be easier to interpret the numbers by looking at charts derived from the table. Then the tables can be used to look back at data for the individual cities and towns.

Fig. 3 below shows the residential levy per household unit for Fiscal Years 2011 and 2017 for Brookline and then the average for its peer communities. It shows the levy going up by just about the same amount for the peers as for Brookline. Thus, although Brookline had a substantial override over this period, many of the peer communities did so as well.

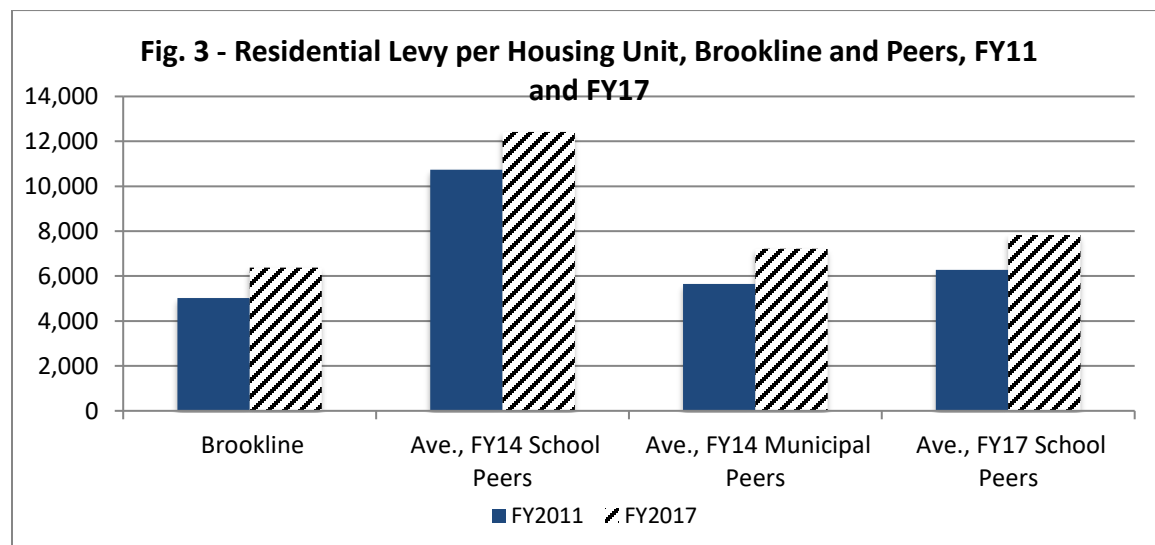


Fig. 4 shows mean household income for Brookline and peers for FY11 and FY17. We see that income for Brookline actually fell slightly, and if adjusted for inflation fell significantly, whereas for the peers it rose. The mean, for those who could use a statistics tutorial, is what we commonly call the average—it

simply adds together all the incomes and divides by the number of households. It is thus pulled up by very large incomes at the top and thus may not be reflective of the middle, or median household. It is included here because the levy, or tax, per household is only available for the peer communities as a mean.

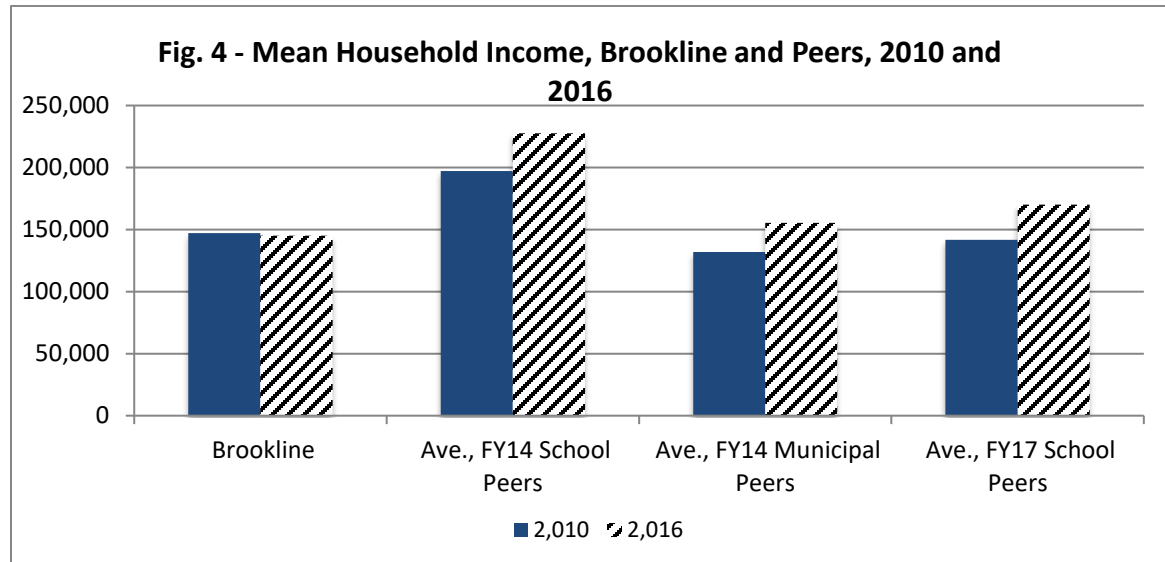


Fig. 5 gives the median household income for Brookline and its peers for FY11 and FY17. The median household income is the one in the middle, if all incomes were ranked from lowest to highest. This is the number commonly posted on the Town Website as an indication of income in Brookline. Median household income did rise slightly from 2010 to 2016, but it rose less for Brookline than for its peers.

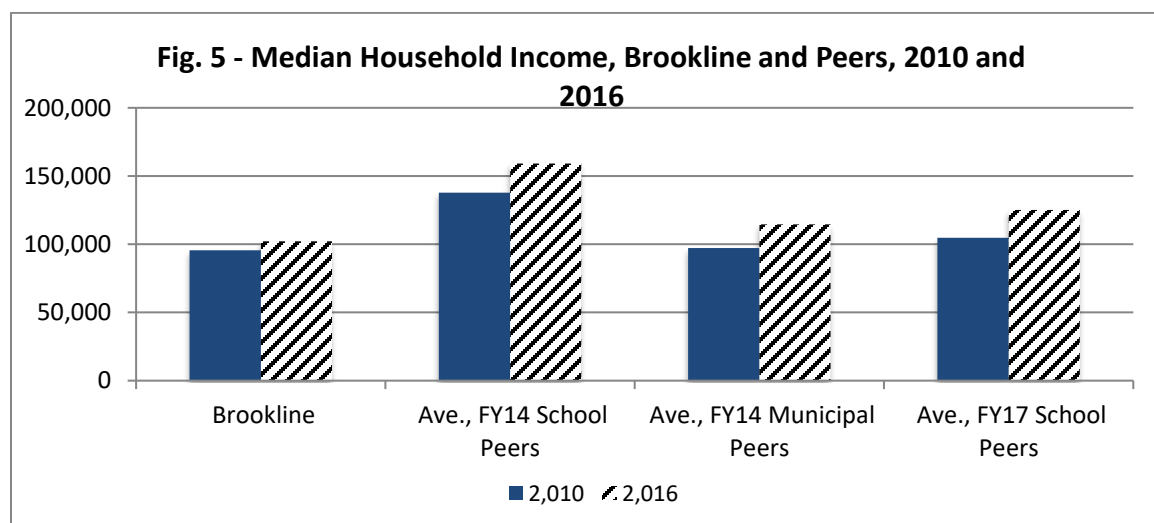


Fig.6 shows the percentage change in the average tax bill and in average income from FY11 to FY17 for Brookline and its peers, and it also shows the change in the consumer price index over this same period of time. Here we see that taxes rose a bit more than did the price index both for Brookline and its peers. But

income actually fell in Brookline, whereas for the peer communities it rose by a bit more than the consumer price index. This is puzzling. It is important to note that there is a sizeable margin of error in the income numbers, as taken from the American Community Survey. The report will have a bit more to say in succeeding pages as to why real income, Income (income adjusted for inflation) might have fallen in Brookline.

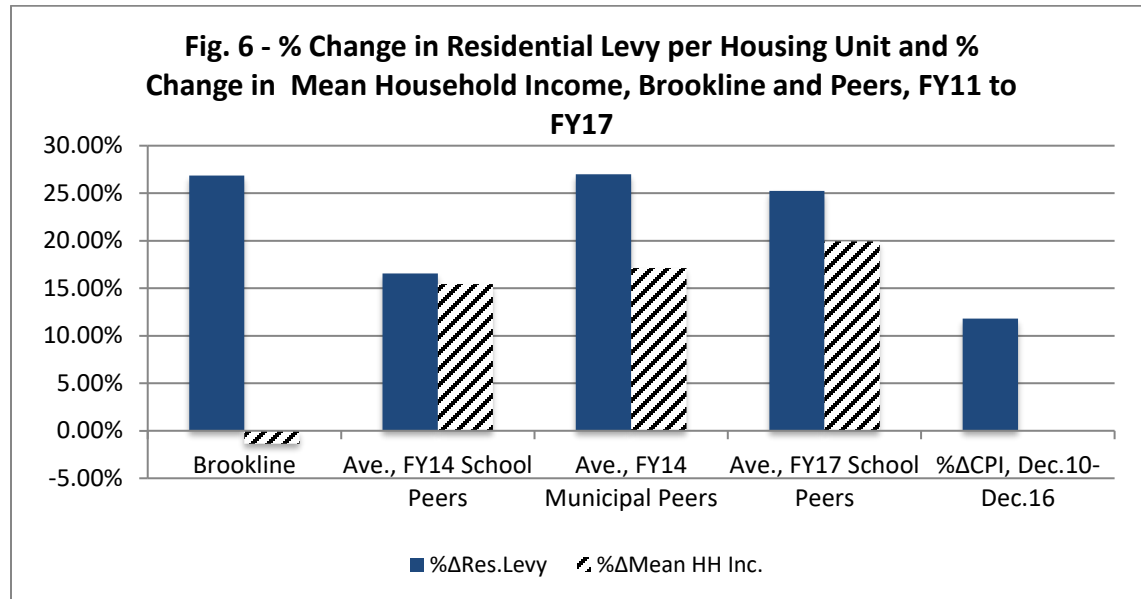
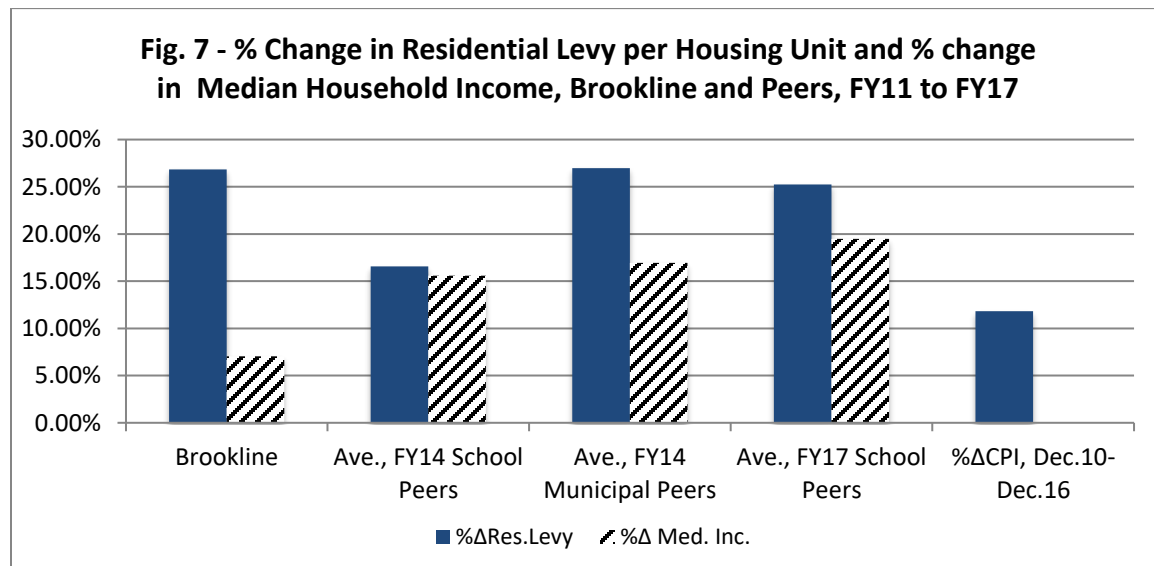
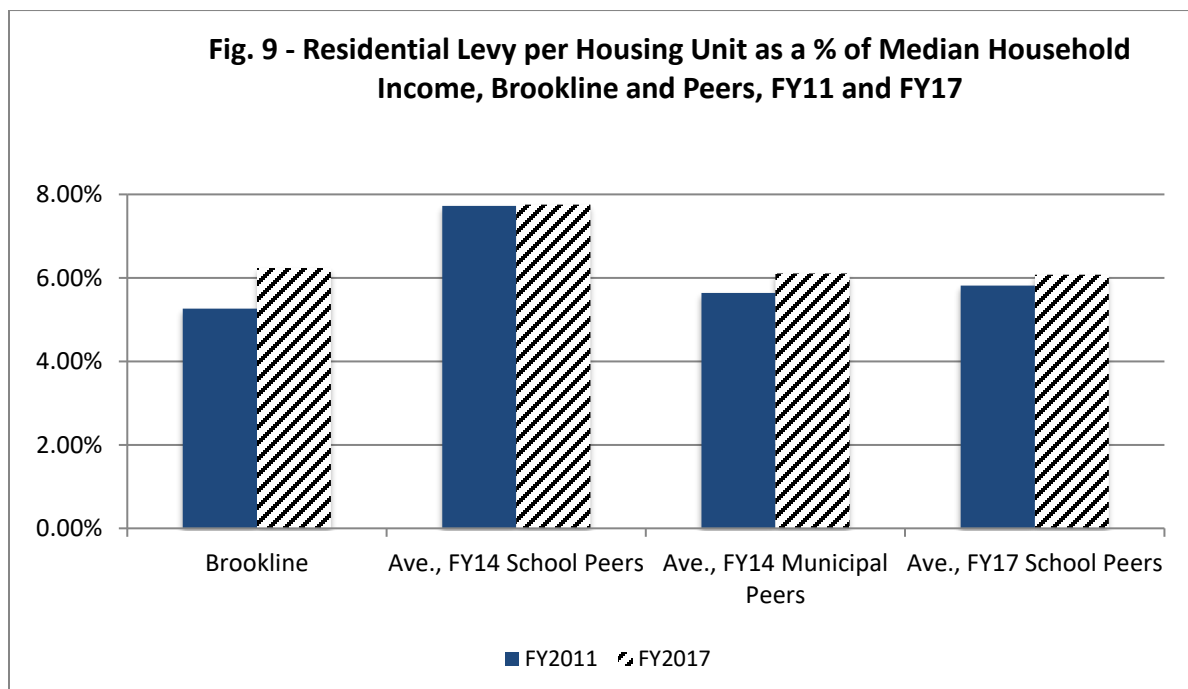
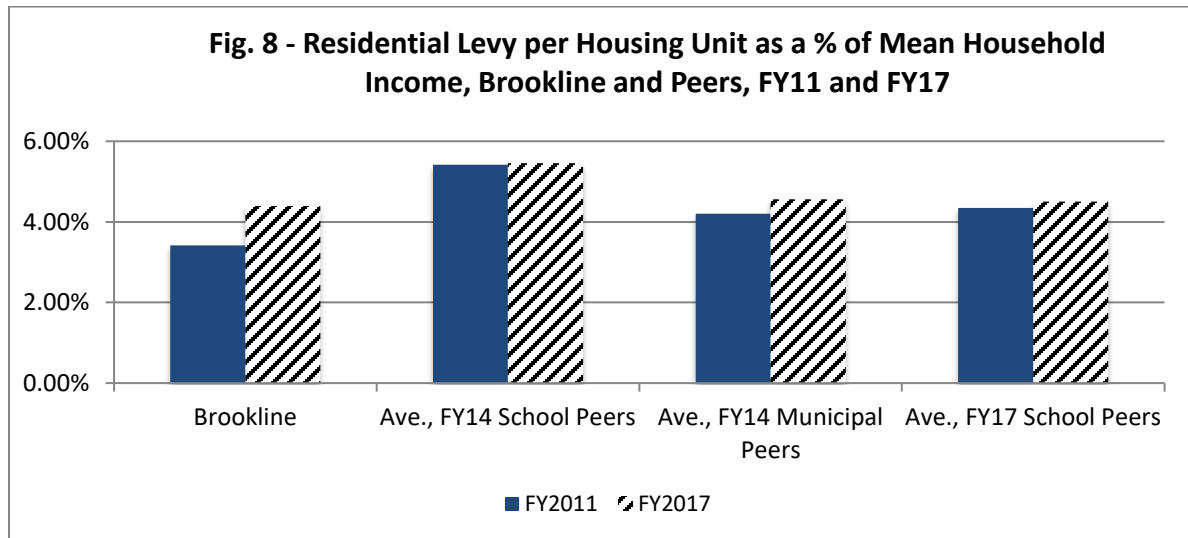


Fig. 7 shows the change in taxes and the change in median income. Bear in mind that in this case we are comparing a mean with a median, but it is useful to look at the change in median household income. As before, we see that taxes rose at about the same rate as those of the municipal peers and the FY17 school peers, whereas median income rose, but at a lesser rate than for the peers and at a lesser rate than the consumer price index.

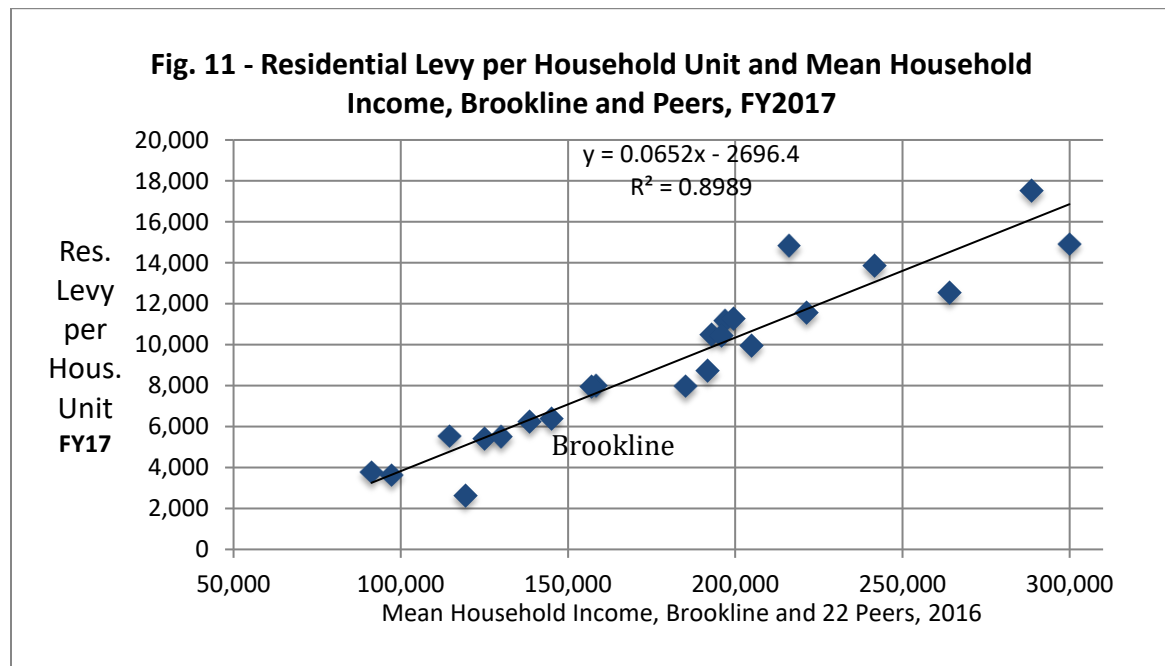
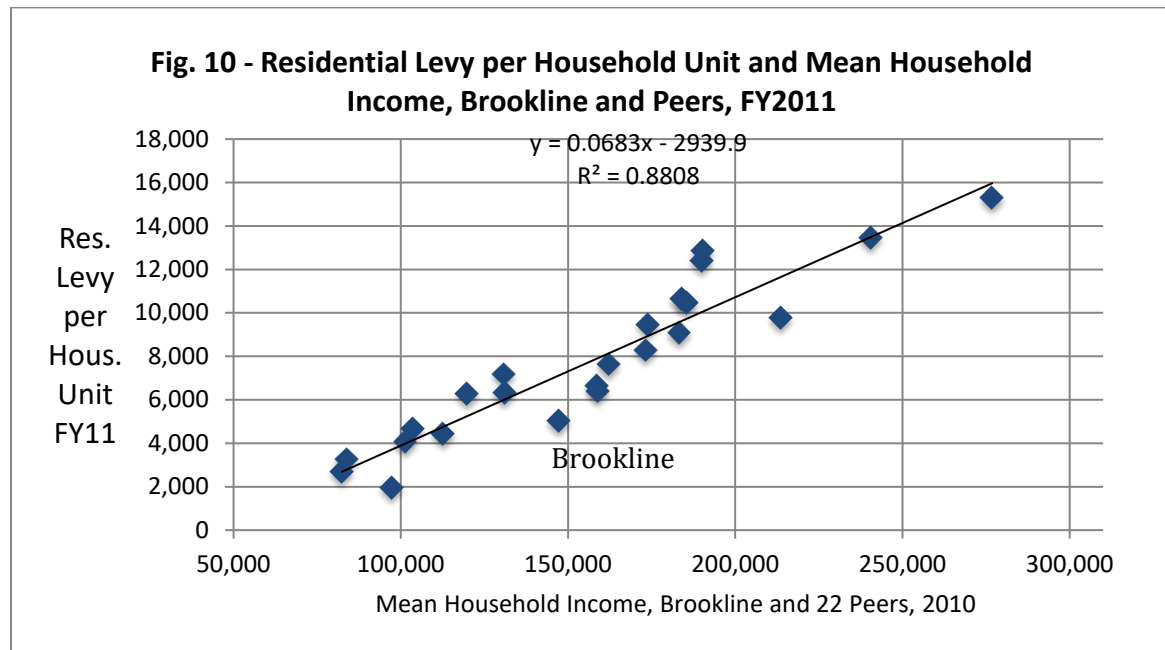


Figs. 8 and 9 show the average tax levy as a percent of mean and median income for Brookline and its peers for FY11 and FY17. By this measure, Brookline was a low-tax community in FY11 but had caught up to its peers, save for the FY14 school peers, by FY17.



Figs. 10 and 11 are scatter diagrams showing taxes and income for all of the towns listed as peers in Table 3, with a linear regression line fitted to the points. Brookline is the one with a mean household income of \$147,140 in FY11 and \$145,131 in FY17. By this measure, in terms of whether we are above or below

the regression line, Brookline was a low-tax community in FY11 but by FY17 was on a par with the others.



So what do we make of all of these charts. If we believe that capacity to pay is greater with a higher level of income, at least for a community if not for individuals, then Brookline has about as much capacity to pay as does its peer communities. But if we believe that capacity to pay additional taxes depends very much on the recent change in real income, then Brookline has very little capacity to pay additional taxes at this point.

Why might capacity to pay, meaning capacity to pay more, depend more on recent changes in income than on level of income? Over time households tend to adjust their spending to their levels of income. If taxes rise, even by more than incomes, it is far easier to pay the additional taxes out of rising real incomes, since this can be done without cutting back elsewhere. When real incomes are falling, then the additional taxes come precisely at a time when households are being forced to cut back elsewhere.

### **Taxes and Property Values, Brookline and Peer Communities.**

Capacity to pay may depend not just on income in a community but upon wealth as well. We have good measures of property values across cities and towns but do not have good measures of wealth beyond those of real estate. Table 4 gives data similar to that of Table 3 but with property value per housing unit substituted for average household income.

Once again, it might be helpful to look at what we find in terms of charts rather than a massive array of numbers. Fig. 12 (immediately following Table 4) is simply a repeat of Fig. 3 above, showing that Brookline's taxes per household were a bit below those of its peers in FY11 but had about caught up by FY17, save for those of its FY14 School Peers, which included a number of high-income, high-tax communities.

**Table 4 - Residential Tax Levy and Residential Assessed Value,  
Brookline and Peers, Fiscal Year 2011 and Fiscal Year 2017**

<b>Municipality</b>	<b>2014 Sch. Peer</b>	<b>2014 Mun Peer</b>	<b>2017 Sch. Peer</b>	<b>Res. Levy per HU FY2011</b>	<b>Res. Levy per HU FY2017</b>	<b>%Δ FY11- FY17</b>	<b>Res.Value per HU FY2011</b>	<b>Res.Vaue per HU FY2017</b>	<b>%Δ FY11- FY17</b>
Brookline	x	x	x	5,024	6,373	26.8%	513,056	736,149	43.5%
Acton			x	7,172	7,994	11.5%	396,686	419,394	5.7%
Arlington		x	x	4,049	5,396	33.3%	326,245	429,582	31.7%
Belmont		x	x	6,330	7,960	25.7%	478,133	627,301	31.2%
Boxborough			x	6,279	6,236	-0.7%	361,282	370,964	2.7%
Cambridge			x	1,966	2,648	34.7%	296,988	503,787	69.6%
Carlisle	x			12,393	13,848	11.7%	768,346	785,945	2.3%
Concord	x			9,073	10,505	15.8%	687,838	746,614	8.5%
Dedham		x		4,660	5,529	18.6%	324,305	374,570	15.5%
Dover	x			13,462	14,904	10.7%	1,150,615	1,142,069	-0.7%
Framingham		x		3,265	3,766	15.3%	203,692	225,395	10.7%
Lexington	x	x	x	8,287	11,154	34.6%	575,471	769,764	33.8%

Lincoln	x			9,469	10,450	10.4%	765,488	762,790	-0.4%
Medford		x		2,700	3,622	34.1%	232,596	343,009	47.5%
Natick		x	x	4,444	5,517	24.2%	352,659	408,955	16.0%
Needham		x	x	6,659	8,727	31.0%	610,944	733,956	20.1%
Newton	x	x	x	6,403	7,968	24.4%	587,477	716,508	22.0%
Sherborn	x			12,869	14,812	15.1%	726,252	723,934	-0.3%
Sudbury	x			10,635	11,552	8.6%	624,492	654,419	4.8%
Wayland	x			10,467	11,264	7.6%	540,909	620,932	14.8%
Wellesley	x	x	x	9,767	12,549	28.5%	854,533	1,064,350	24.6%
Weston	x			15,293	17,542	14.7%	1,342,691	1,414,713	5.4%
Winchester			x	7,632	9,959	30.5%	630,773	810,954	28.6%

				FY2011	FY2017	%Δ Res. Levy	FY2011	FY2017	%Δ Res. Value
Brookline				5,024	6,373	26.8%	513,056	736,149	43.5%
Ave., FY14 School Peers				10,738	12,413	16.6%	784,010	854,731	10.4%
Ave., FY14 Municipal Peers				5,657	7,219	27.0%	454,605	569,339	25.3%
Ave., FY17 School Peers				6,272	7,828	25.2%	497,381	623,229	26.0%
U.S. Cons.Price Index (Dec of FY)				215.9	241.4	11.8%			

Sources of Data: Residential Levy and Residential Assessed Value from the Massachusetts Department of Revenue, Municipal Data Bank. Number of Housing Units from the American Community Survey, 2016 and 2010.

**Table 4 cont'd - Residential Tax Levy and Residential Assessed Value**

Municipality	Levy per HU/ Value per HU FY2011	Levy per HU/ Value per HU FY2017
Brookline	0.98%	0.87%
Acton	1.81%	1.91%
Arlington	1.24%	1.26%
Belmont	1.32%	1.27%
Boxborough	1.74%	1.68%
Cambridge	0.66%	0.53%
Carlisle	1.61%	1.76%
Concord	1.32%	1.41%
Dedham	1.44%	1.48%
Dover	1.17%	1.30%
Framingham	1.60%	1.67%
Lexington	1.44%	1.45%

Lincoln	1.24%	1.37%
Medford	1.16%	1.06%
Natick	1.26%	1.35%
Needham	1.09%	1.19%
Newton	1.09%	1.11%
Sherborn	1.77%	2.05%
Sudbury	1.70%	1.77%
Wayland	1.93%	1.81%
Wellesley	1.14%	1.18%
Weston	1.14%	1.24%
Winchester	1.21%	1.23%

FY2011 FY2017

Brookline	0.98%	0.87%
Ave., FY14 School Peers	1.41%	1.50%
Ave., FY14 Municipal Peers	1.28%	1.30%
Ave., FY17 School Peers	1.27%	1.29%

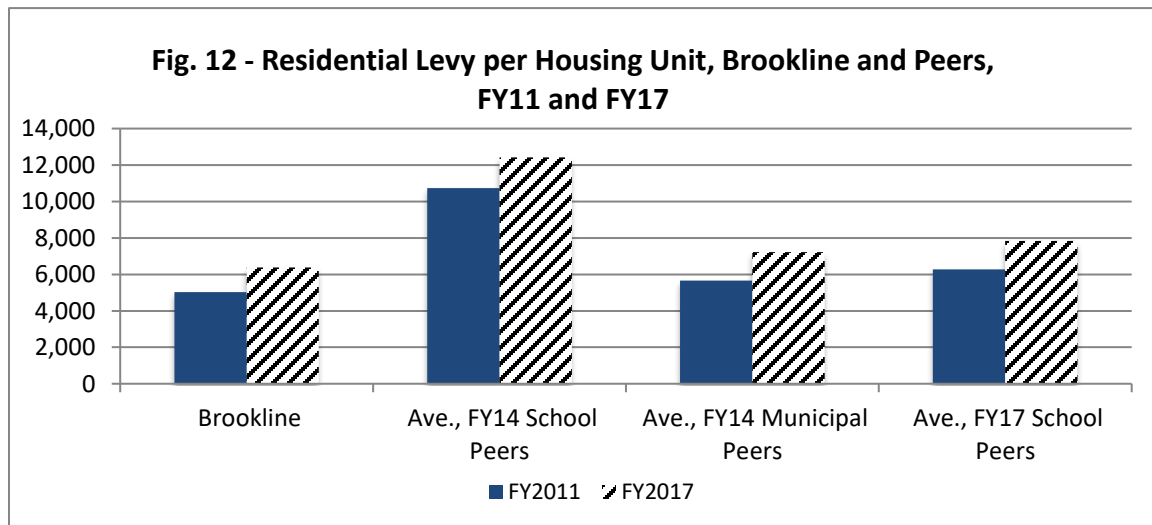


Figure 13 shows the residential value per housing unit. Here we see that assessed values were higher in Brookline than in its peers save those of the FY14 school peers, and values rose by more in Brookline than in its peer communities over the six-year period FY11 to FY17. The more rapid increase in Brookline is at least in part because it has a greater number of apartments and condominiums in its housing mix than in the average of its peers, and it is these units that rose the most in value in the years following the housing crisis.



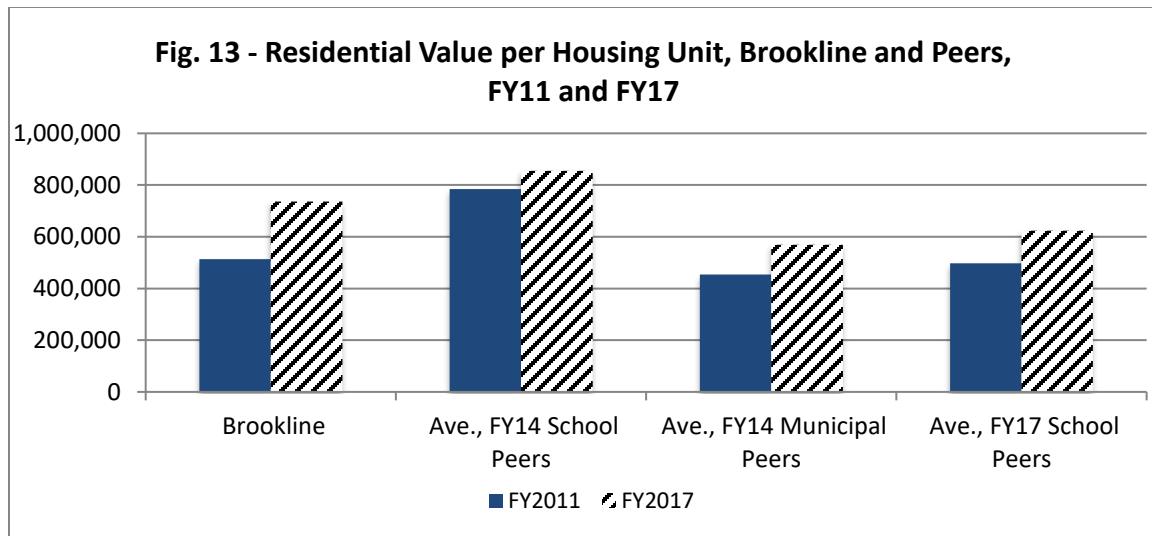
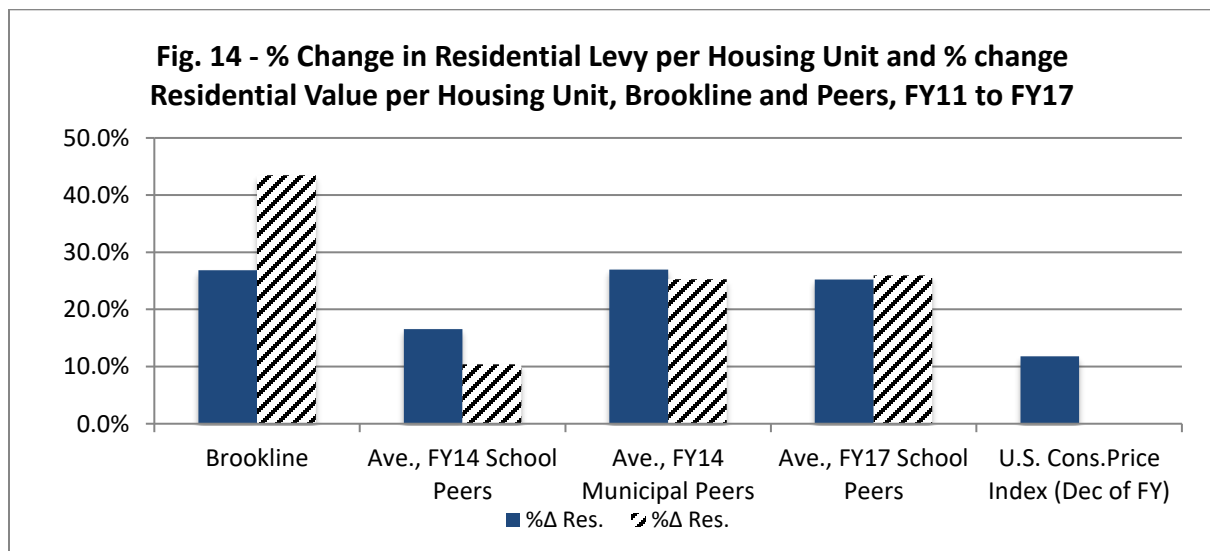
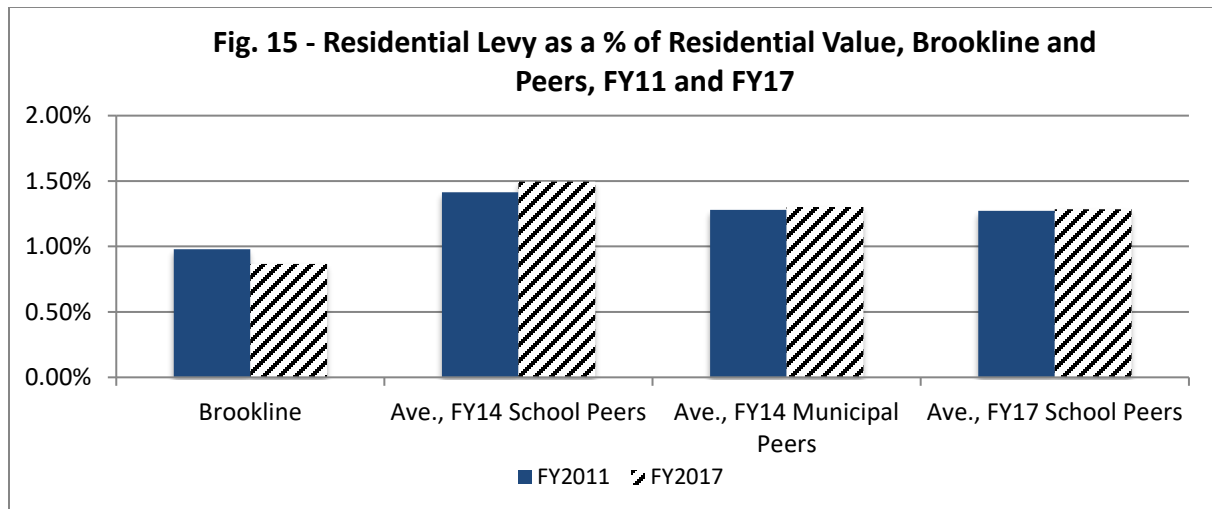


Figure 14 shows the percentage change in housing values and the percentage change in taxes for Brookline and peer communities over the six-year period FY11 to FY17, and it also shows the change in the consumer price index. Property values rose much faster in Brookline than in the peer communities, and they rose in real terms.

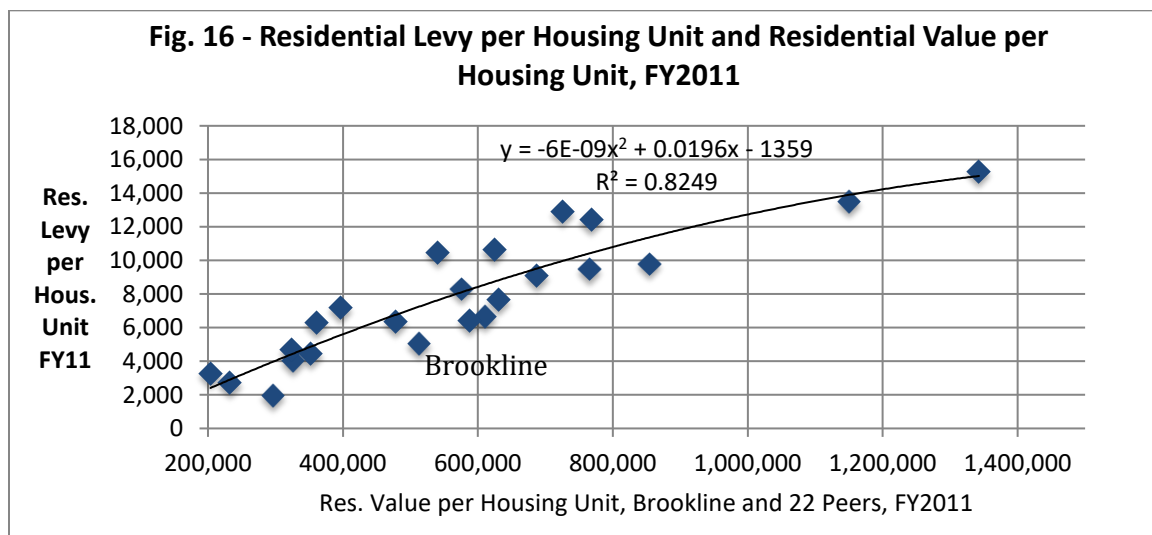
Figure 15 shows the average residential levy as a percent of the average residential value for Brookline and its peers. This number is nothing more nor less than what the tax rate would be without a residential exemption. By this measure, a measure of wealth as reflected in property values, Brookline is a low-tax town relative to its peers and is becoming more so. By this standard Brookline does have a greater capacity to pay additional taxes than does its peers if, and this is a big if, property owners are willing and able to tap the increase in their housing equity in order to pay additional taxes.

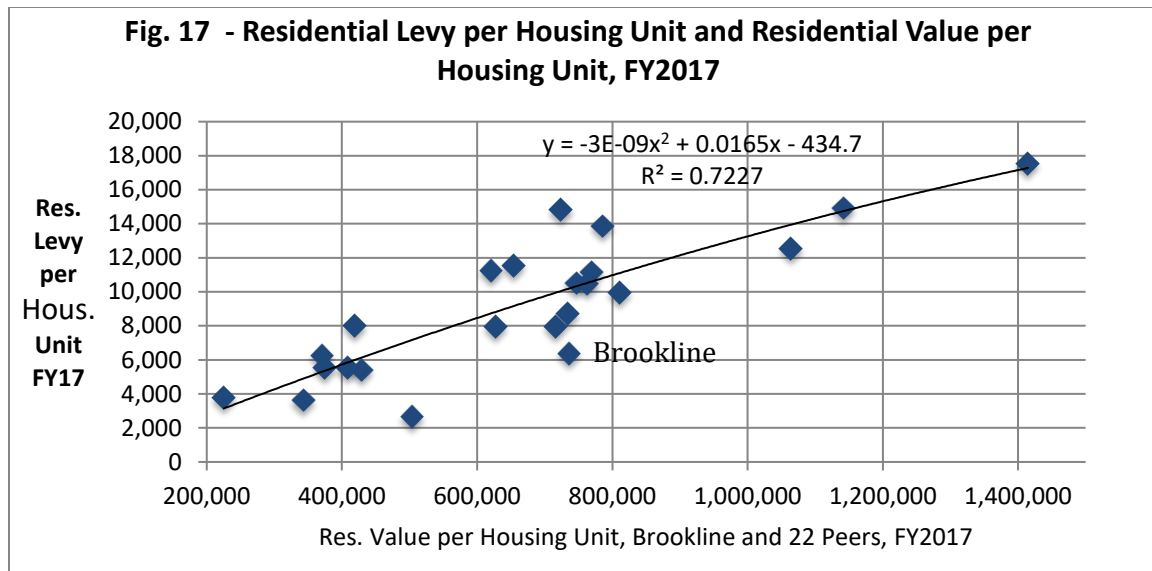




Owners may be reluctant to tap their equity, even if it were easy to do so, either because they want to hold onto the gains or because the gains are only on paper until or unless the property is sold. Values could go down as well as up, most particularly in light of recent changes in Federal tax law. Of course, incomes could also go down as well as up, as indeed they did in Brookline over the recent past, as least as measured by data from the American Community Survey.

Figures 16 and 17 show plots of taxes against assessed values, again with lines of goodness of fit (this time second-order polynomials) rather than linear. Brookline is below the regression line in FY11 (the point with an average value of \$513,000), and is even further below the line in FY17 (the point with an average value of \$736,000). By this measure, Brookline was a low-tax town in FY11 and was even more a low-tax town in FY17.





### What then, of Capacity to Pay?

The use of both income and property values as measures of capacity to pay has a precedent in their use for determining chapter 70 state aid to schools, where personal income and property values are given equal weight in determining a foundation budget. Chapter 70 is the major Massachusetts program for providing state aid to schools and the foundation budget establishes a minimum requirement for the municipality's spending on schools.

This report has simply made an effort to present the best and most recent data available on taxes, income, and property values for Brookline and its peers as that term has been used by both the town and the schools in the recent past. The data from the Massachusetts Department of Revenue are as thorough and accurate as we can get. The data from the American Community Survey are based on sample surveys and are subject to a fairly wide margin of error.

### Did Household Income Really Decline in Brookline from 2010 to 2016?

The numbers showing that household income in Brookline failed to keep pace with inflation over the period 2010 to 2016, and in fact fell by a substantial amount in real terms, are surprising. Clearly some people in Brookline are hurting, but are more hurting now than in 2010? And are more hurting in Brookline than in peer communities? And if so, how have people managed to stay in Brookline, where both rents and housing prices have risen by more than inflation? And if more people are hurting in Brookline, why don't we see this in terms of the percentage of households that are "housing stressed?"

This is puzzling and is worthy of further examination. A first thought on looking at the data was that it might be due to sampling error. Perhaps the group of households chosen for the sample, and responding, just happened to include more high-income people in 2010 and more low-income people in 2016. The sampling is carefully done, with rigorous Census Bureau standards, but the numbers are subject to fairly large margins of error. The margins of error would be lower for an average of the peers, since errors in

one direction would tend to cancel out errors in the other, but they could be large for any one town, such as Brookline.

As check against this, the differences in income for Brookline were also noted for the six-year period beginning and ending one year earlier, 2009 to 2015. The results are shown in Table 5 below, with changes noted both in nominal terms and in real terms as deflated by the U.S. consumer price index.

**Table 5 - Change in Brookline's Mean and Median Household Income.  
2010-2016 and 2009-2015**

	<b>2010</b>	<b>2016</b>	<b>%Δ</b>	<b>2009</b>	<b>2015</b>	<b>%Δ</b>
<b>Mean HH Income</b>	147,140	145,131	-1.37%	140,800	136,441	-3.10%
<b>Consumer Price Index</b>	218.056	240.007	10.07%	214.537	237.017	10.48%
<b>Real Mean HH Inc. (2016\$)</b>	161,952	145,131	-10.39%	157,516	138,162	-12.29%
	<b>2010</b>	<b>2016</b>	<b>%Δ</b>	<b>2009</b>	<b>2015</b>	<b>%Δ</b>
<b>Median HH Income</b>	95,448	102,175	7.05%	92,451	95,518	3.32%
<b>Consumer Price Index</b>	218.056	240.007	10.07%	214.537	237.017	10.48%
<b>Real Med. HH Inc. (2016\$)</b>	105,056	102,175	-2.74%	103,427	96,723	-6.48%

The table shows that real household income declined by even more when observed over the period beginning one year earlier. Since the observations are from different samples in each of the years noted, it is unlikely that the downward changes are due to margin of error. It does appear that for some reason, Brookline has not kept up with its peers in terms of income growth over the recent past.

What then might account for the fall in real income among Brookline households?

The data should not be interpreted as meaning that people who have lived here continuously over this time period, and have continued to be employed full time, have suffered a loss of real income. (We do not have good data on this.) The more likely cause is that through deaths, retirements, in-migration and out-migration, that higher-income households have been replaced by lower-income households. This could be either because of a change in the age structure of Brookline households, or because of an increase in renters relative to homeowners.

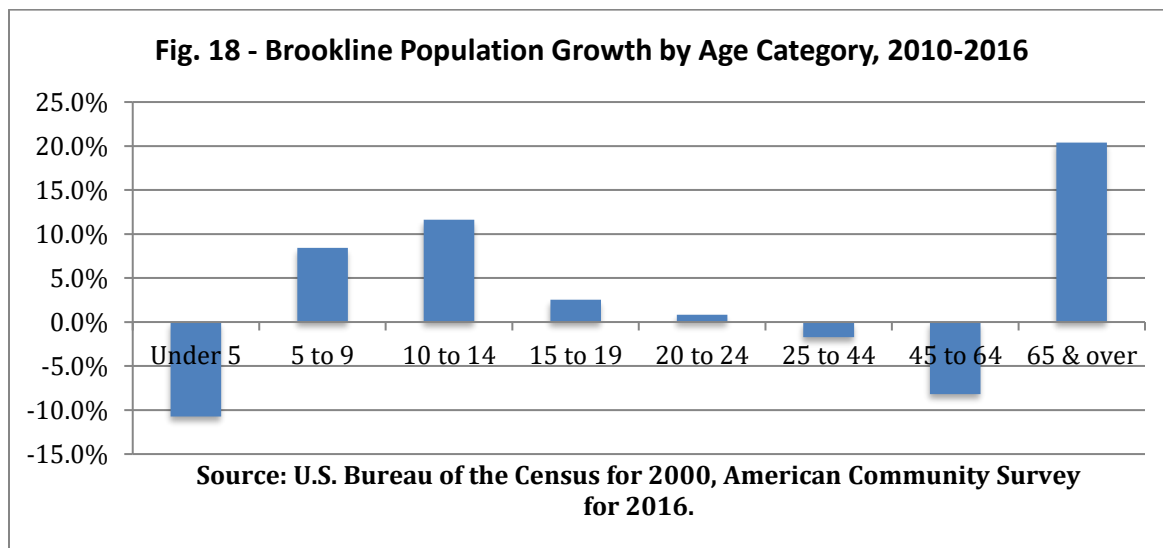
A first question to be asked is whether we have had more rapid growth among either the younger or older households than among those in the prime earnings years.

Table 6 shows the population distribution by age for Brookline in 2010 and 2016, and Figure 18 shows the percentage changes in the form of a chart.

**Table 6 - Brookline Population by Age, 2010 and 2016**

Age	2010	2016	$\Delta$	% $\Delta$
<b>Total</b>	58732	59180	448	0.8%
<b>Under 5</b>	3209	2864	-345	-10.8%
<b>5 to 9</b>	3031	3286	255	8.4%
<b>10 to 14</b>	2606	2909	303	11.6%
<b>15 to 19</b>	2817	2888	71	2.5%
<b>20 to 24</b>	6618	6674	56	0.8%
<b>25 to 44</b>	19,724	19385	-339	-1.7%
<b>45 to 64</b>	13,233	12151	-1082	-8.2%
<b>65 &amp; over</b>	7,494	9023	1529	20.4%

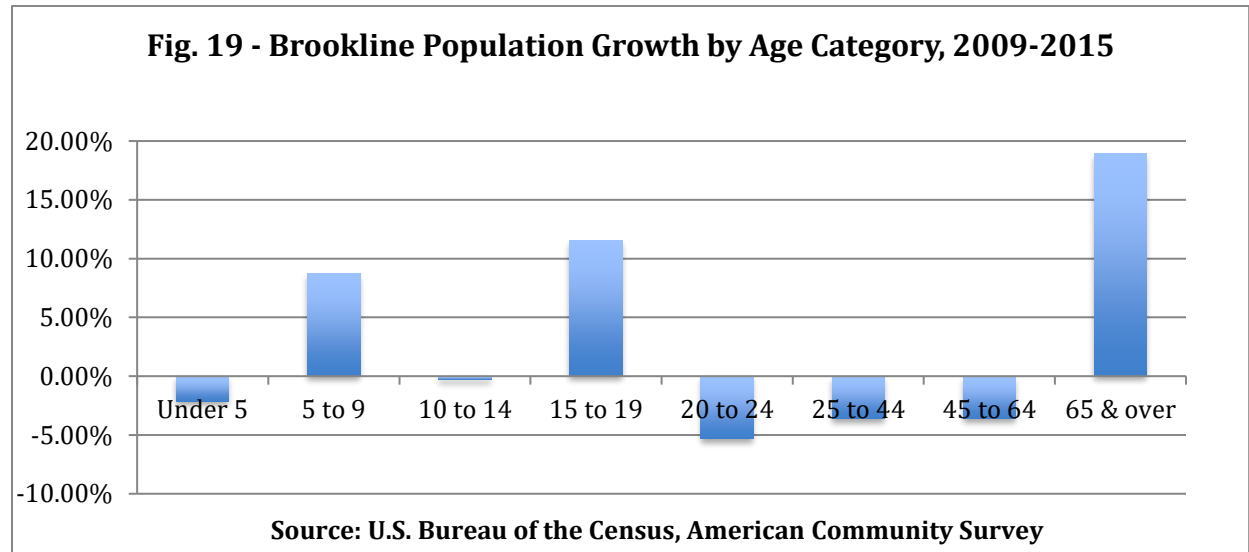
Source: American Community Survey, Census Data for 2010, American Community Survey Estimates for 2016.



The data show a substantial decline in Brookline's population under 5 years of age, which is very different from the large increase between 2000 and 2010 (not shown here). Then we see growth in the school-age population, ages 5 to 19, and a slight increase in the young adult group aged 20 to 24. Then we see a marked decrease in the prime working-age population between 25 and 64. Finally, we see a very large growth in Brookline's population aged 65 and over.

If the data are correct, Brookline has shown substantial growth in its population of students and of the elderly and a decline in its population of prime working age. This could well account for at least some of the reported decline in average household income. It is possible of course that the survey for 2016 just happened to pick a disproportionate number of households with school-age children and elderly, but the pattern of a decline in prime working-age population and a large increase in the 65 & over category, is there in looking at changes over 2009-2015 as well. This is shown in Fig. 9 below.

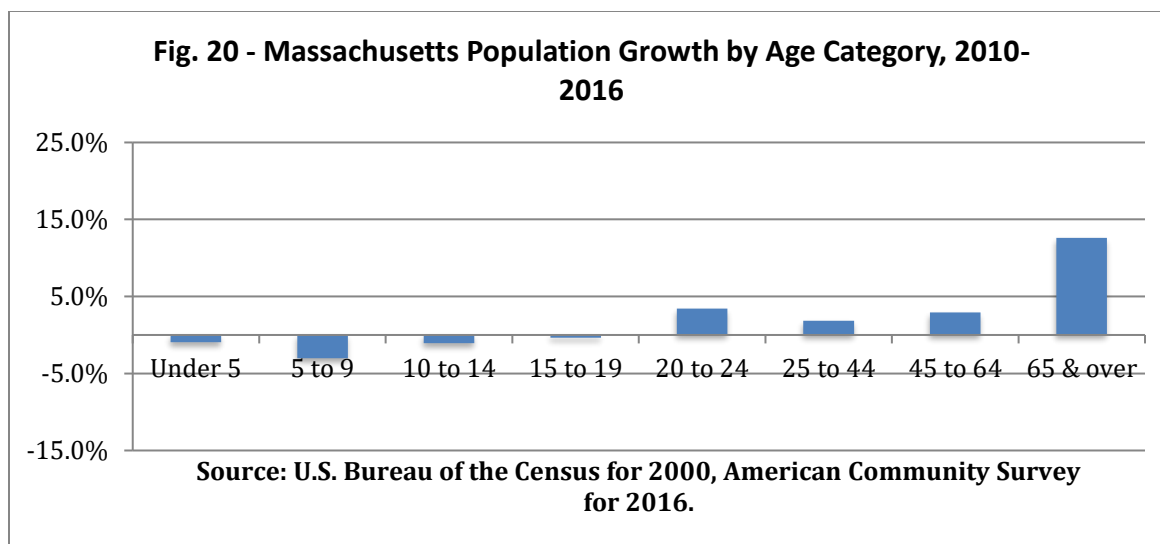
The reported decline in the population under 5 years of age is substantially lower in the period one year earlier (shown in Fig. 18). The difference in this category between Fig. 18 and Fig. 19 is likely due to sampling error in a narrow age category, where we have much smaller samples.



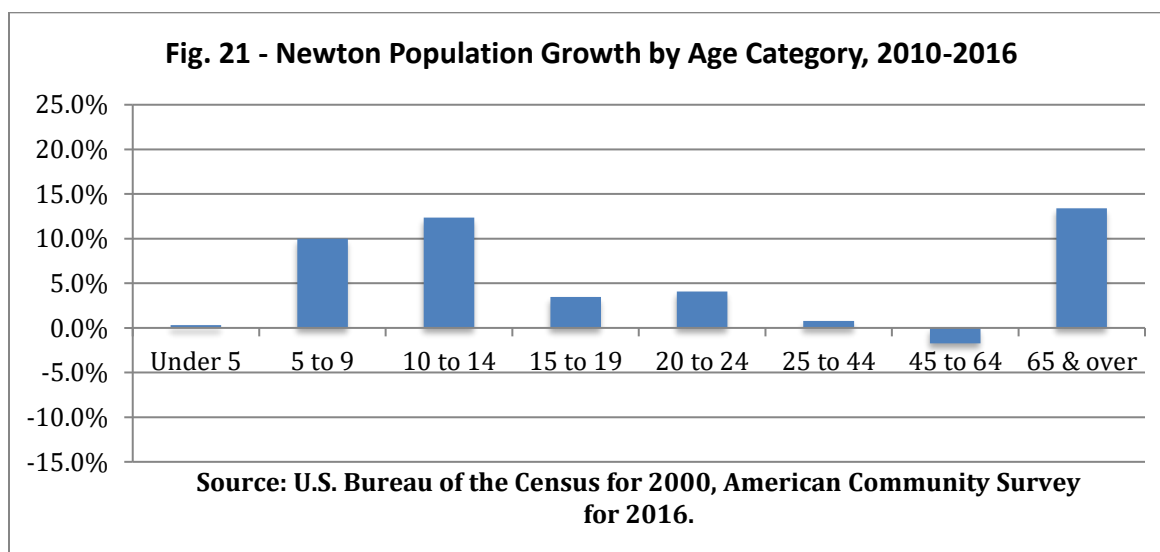
It is of some interest to compare this with what we might expect from the number of births reported in the Brookline town census for the prior five years, as of 2016-17 and 2010-11. The birth numbers, as employed by the school committee in its Preliminary Enrollment Report for 2017, yield a five-year total for School Year ending in 2016-17 that is 4.7% lower than the five year total for school year ending in 2010-11. The latter is the change we would expect in this youngest age category if we had no deaths or in-migration or out-migration. This number, as used by the school committee, is based on a count of the population, to the extent reported in the town census, rather than on a sample, and is likely to be the more accurate number.

Is Brookline unique in its demographic change, or are other communities showing the same pattern. We don't have the annual population estimates for all of the peer communities, but we do have them for Massachusetts as a whole and for the larger cities and towns near Brookline. Figs. 20-23 show the demographic change for the state of Massachusetts and for Newton, Cambridge, and Boston.

For Massachusetts as a whole we see a decline in the school age population and a slight increase in the prime working-age population. We see a substantial increase in the population 65 and over but not nearly to the degree that we see in Brookline.

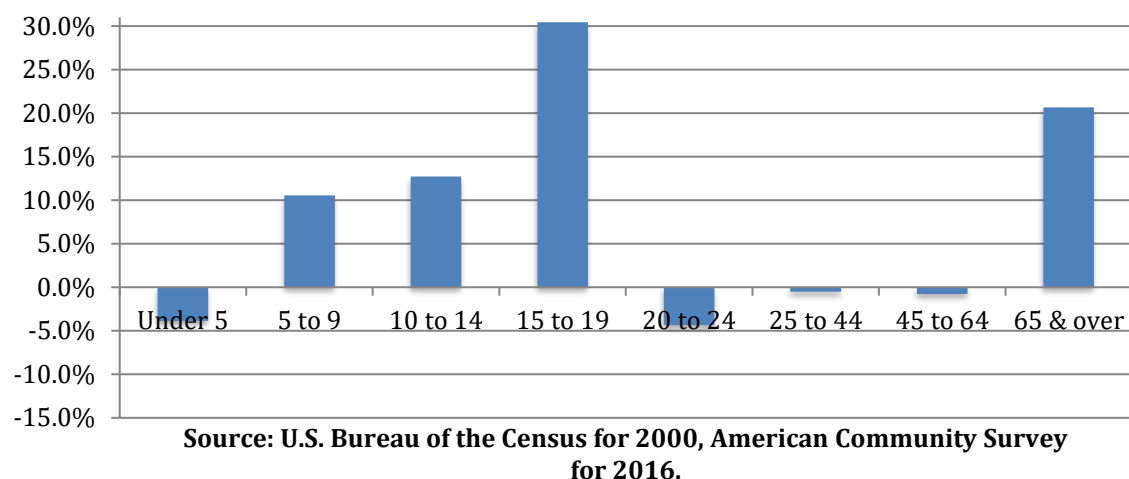


Newton shows an increase in its school-age population that is similar to that of Brookline and a slight decrease in its prime working-age population. It shows an increase in its population 65 and over but at a rate more similar to that of the state as a whole than to that of Brookline.



Cambridge shows a pattern similar to that of Brookline, with growth in both the school-age population and that of those aged 65 and over.

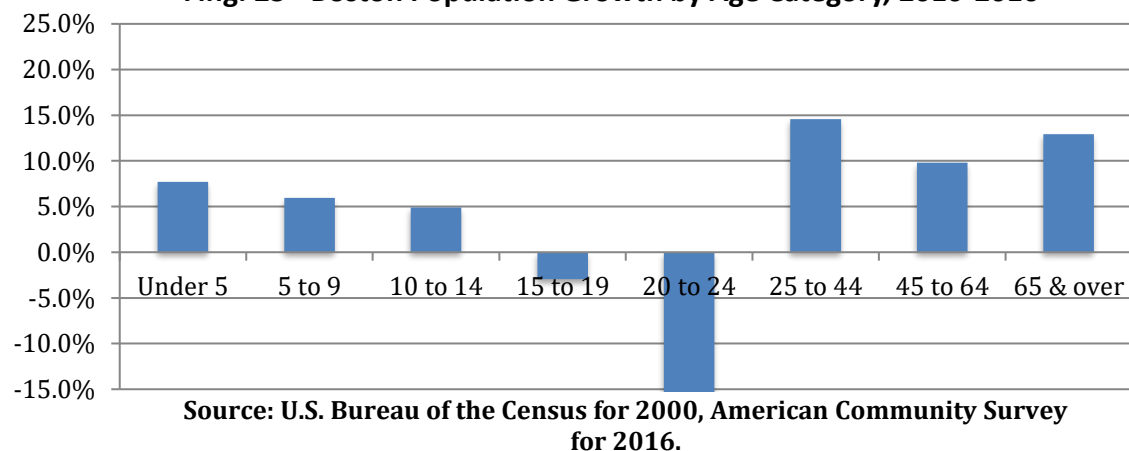
**Fig. 22 - Cambridge Population Growth by Age Category, 2010-2016**



Finally, Boston shows modest growth in its school-age population, a significant drop in its population aged 20 to 24, and a large rise in its population of prime working age, 25 to 64.

Boston shows a rise in its population aged 65 and over that is closer to that for the state as a whole than it is to Brookline.

**Fig. 23 - Boston Population Growth by Age Category, 2010-2016**



If the data are to be believed, the people in the prime working years are choosing Boston over Brookline, and the elderly are choosing Brookline over Boston.

### **Renters vs. Owners**

Might the decline in real income in Brookline (both mean and median) be due in part to an increase in the number of renters relative to owners? Between 2010 and 2016, in the wake of the financial crisis, the



homeownership rate in Massachusetts fell from 65.3% to 59.7%. In Brookline it fell by less, from 50.6% to 49.2%, using numbers from the American Community Survey, as shown in Table 2 earlier in this report. The numbers for both 2010 and 2016 are lower in Brookline because, even after a wave of condo conversions, Brookline has a larger share of rental housing than does the state as a whole.

The change in Brookline is less than for the state as a whole, and this may be due in part to the fact that home prices stayed robust in Brookline throughout the financial crisis, providing some protection against people being forced out due to foreclosure. The homeownership among the elderly in Brookline actually rose substantially over this period of time, from 55.6% to 65.1%, whereas for those under 65 years of age it fell by five points, from 49.4% to 44.4%. It appears that elderly owners managed to stay in their homes, whereas elderly renters may have been forced out by rapidly rising rents. (We have no direct information on this.) Nonetheless, Brookline did experience a net reduction of 211 owner-occupied units and a net increase of 477 renter-occupied units. Owners have higher incomes than renters, on average, and thus the move to more rental units is likely to have had some impact on the change in household income.

### A Longer-Term Look at Household Income and Taxes

Finally, it is of interest to ask whether the fall in real income in Brookline over this period is a continuation of a longer-term pattern or perhaps a reversal of what we had in prior years. Fig. 24 shows median household income for Brookline and for peer communities for 1999 and for the years 2009 through 2016. Incomes are in real terms, deflated by the U.S. Consumer Price Index, and shown indexed to 1999=100.

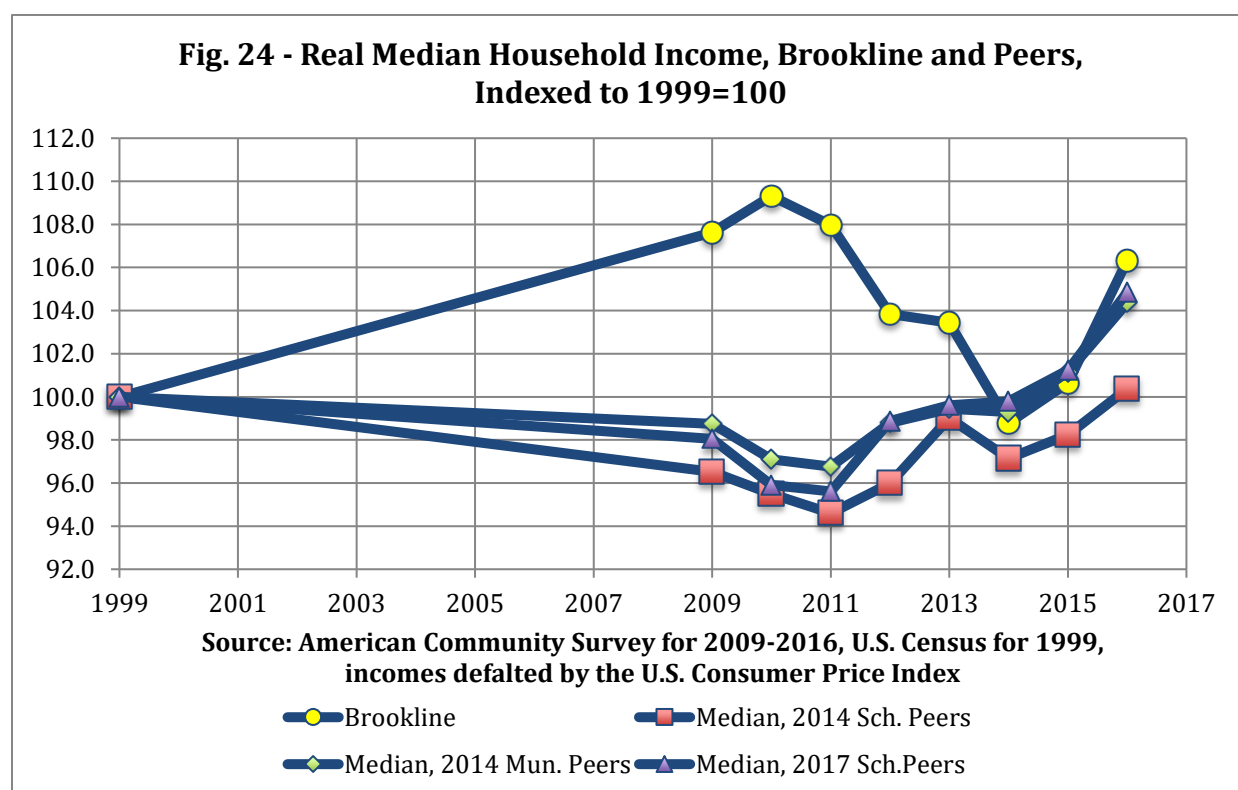


Fig. 24 shows a very different income pattern for Brookline than for the medians of its peers, at least until 2015, when income turns up for Brookline and for the peers.

In Brookline median household income rose substantially from 1999 to 2010, while that of its peers fell. Then from 2010 to 2014, roughly, income fell in Brookline but rose in the other communities. Then income rose in both Brookline and the peers from 2014 to 2016. Over the entire period, Brookline slightly outpaced its peers in terms of growth of median household income. At least part of the reason for this dramatic difference in the income patterns may be a shift from renting to owning over the earlier period and then back a bit to renting in the later years.

Brookline had almost no growth in the total number of housing units over the period 2000 to 2016, but it did have a substantial increase in the number of condominiums, most of which was due to condo conversion rather than to new construction. Table 7 shows the total number of housing units in Brookline over these years, as taken from the decennial census and from the American Community Survey. The numbers are higher than those shown for households in Table 2 because they include vacant as well as occupied units.

**Table 7 - Number of Housing Units in Brookline**

Year	Number of Housing Units
2000 (Census)	26,413
2010 (Census)	26,448
2010 (Amer. Comm. Survey)	26,412
2016 (Amer. Comm. Survey)	26,458

Table 8 shows the number of condominium units in Brookline for Fiscal Years 2000, 2010, and 2016, and the number of such units with and without the residential exemption.

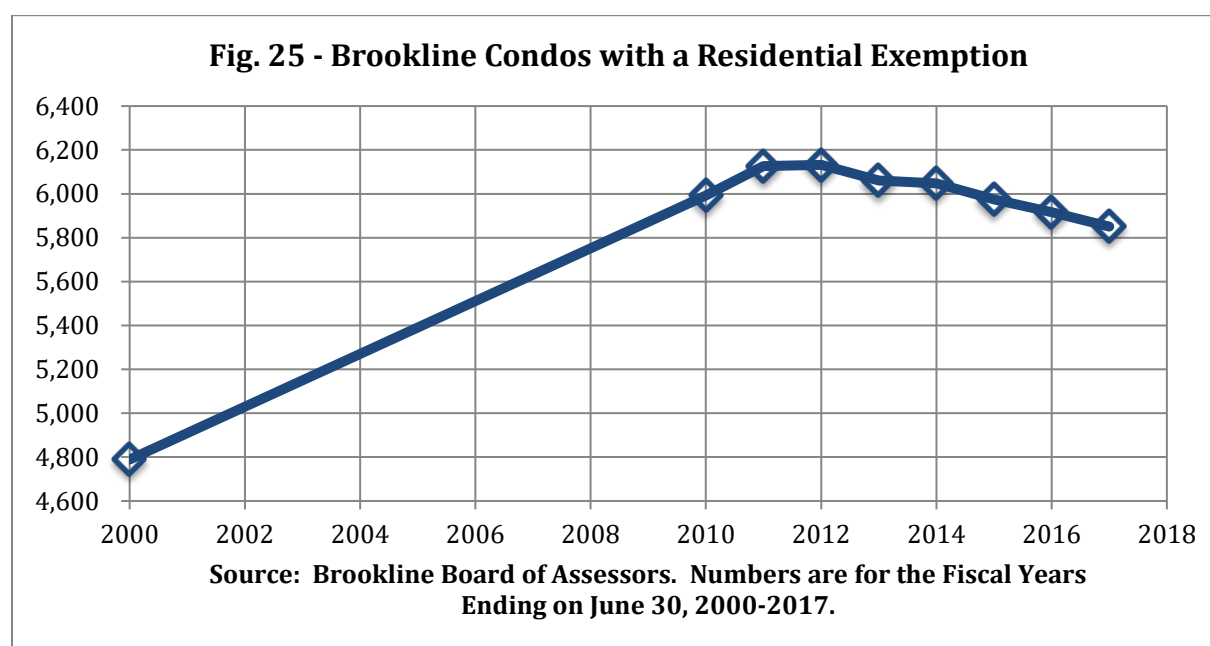
**Table 8 - Number of Residential Condominiums in Brookline**

Year	Total Condos	With the Res. Exemption	Without the Res. Exemption
2000	7,480	4,789	2,691
2011	9,706	6,126	3,580
2017	10,074	5,851	4,223
Δ, 2000-11	2,226	1,337	889
Δ, 2011-17	368	(275)	643

Source: Brookline Board of Assessors.

The number of condos rose substantially, even as the total number of housing units barely changed. Thus, the number of new condos can be taken as a rough measure of the loss of rental apartments, some of which of course came back on the rental market through purchase by investors. Any net increase in the number of condos with a residential exemption is thus a rough measure of the net loss of rental units, and vice versa. There was a net loss of rental units of 1337, by this measure, over the earlier period, and then a net gain of 275 rental units over the later period.

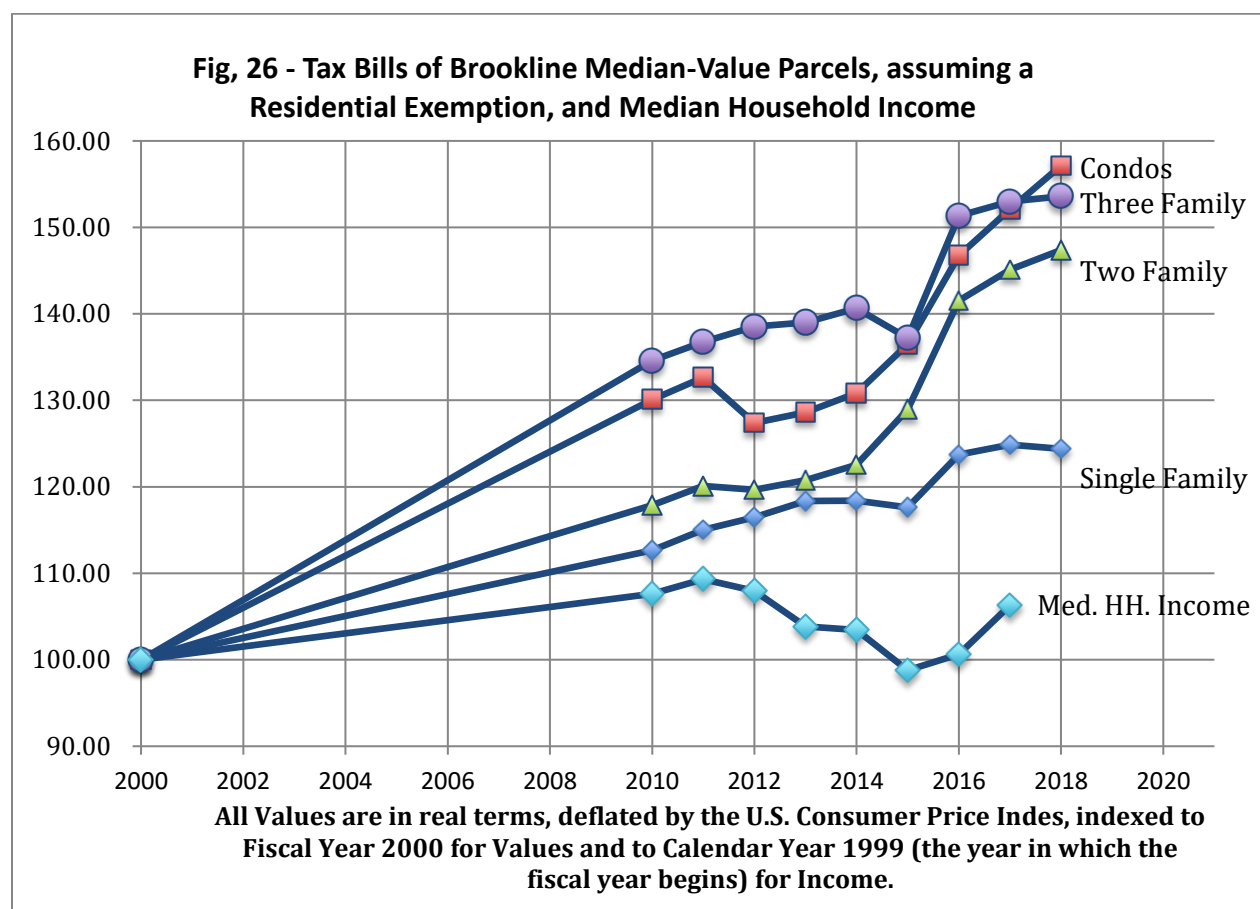
Figure 23 shows the number of Brookline condos with a residential exemption over the fiscal years for which income is plotted over calendar years in Figure 22 above.



The chart shows roughly the same pattern for residential-exemption condos as for income. Assuming that one can enter Brookline with less income as a renter than as an owner, this shift from renting to owning, and then back to renting, may partially explain the rise and fall of median household income. To buy a condo, for those who need a mortgage to do so, requires a substantial amount of income, most particularly following the financial crisis of 2008. To rent a condo one needs first and last months' rent and a security deposit along with some assurance of continuing income.

That said, the pattern of income change is something of a mystery. What is quite clear is that real household income in Brookline rose sharply in Brookline from 2000 to 2010, then fell sharply until the two the most recent years, when it rose once again. Over the entire period, 1999 to 2016, median household income, adjusted for inflation, rose by just a bit more in Brookline than it did for an average of the peer communities.

And what about tax bills and real income over the longer period? Fig. 26 shows the Brookline tax bills on a median-value property, for single-family homes, condos, two-family, and three-family homes along with median household income, all in real terms as deflated by the U.S. consumer price index. Tax bills did rise by a good deal more than did income, even in the period when income was rising, and the gap widened considerably from 2010 to date.



It is notable that tax bills rose by much for condos and twos and threes than for single-family homes. This holds both for tax bills of median-value properties, and for the values as well. (Values are not shown directly here.) In the earlier period, the era of the housing boom leading to the financial crisis, it was easier to speculate by purchasing a condo than a single-family home, and two and three family homes were attractive because of their potential for condo conversion as condo prices rose. In the later period, as housing demand shifted from owning to renting, both condos and two and three family homes were attractive to investors for their rental income.

### Brookline Overrides and Changes in Home Prices.

Since 1990 Brookline has voted for operating overrides in 1994, 2008, and 2015, and for debt exclusions in 1995 and 2015. Table 9 gives data on assessed values of Brookline single-family homes and home price data for the Greater Boston Area as taken from the S&P Case-Shiller Home Price Index. Assessed values for Brookline are based on selling prices of comparable homes in the year prior to the beginning of

the fiscal year. Table 9 gives housing prices for single-family homes for Brookline and the Greater Boston area for 1990 thorough 2016, shown in log form and indexed to 1990 = 0. The changes from year to year are roughly equal to percentage changes as commonly understood.

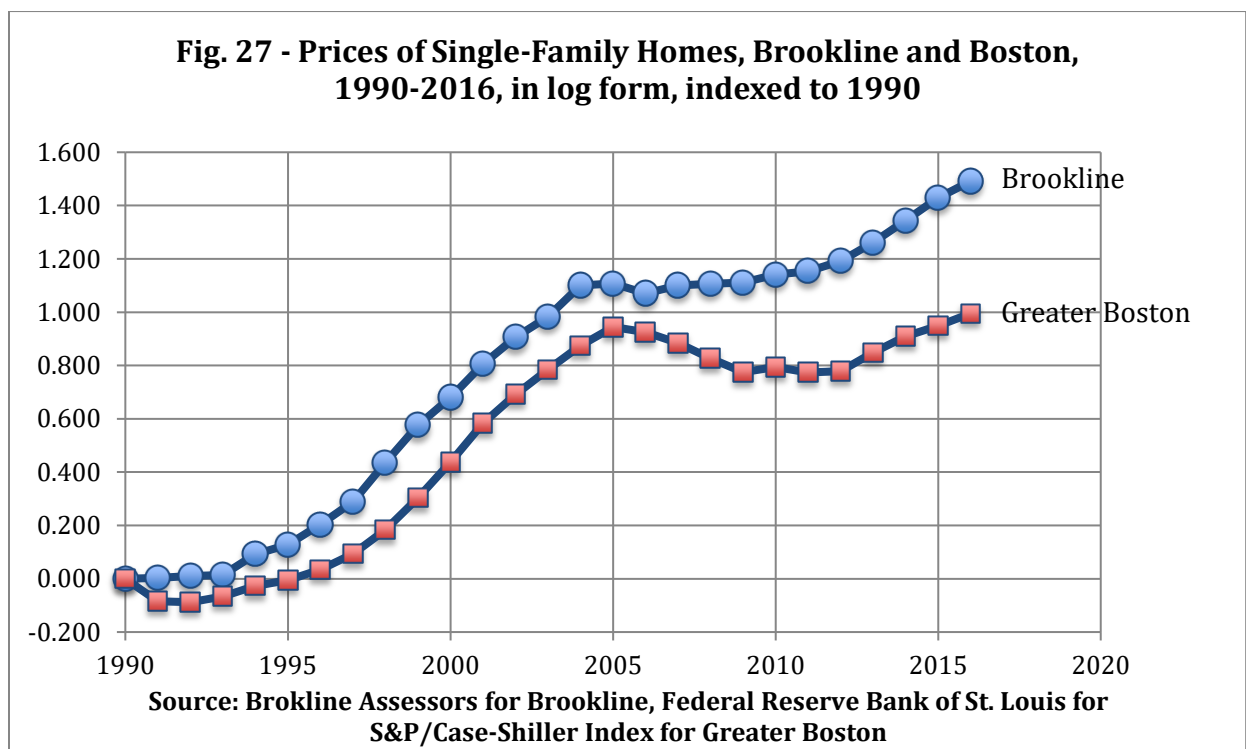
**Table 9 - Prices of Single-Family Homes, Brookline and Greater Boston, 1990-2016**

Fiscal Year	Med. Val. Brookl. SF Homes	Year of Sales from which Med.Values are taken	Case-Shiller Gr. Boston Home Price Index	Log of Brookl. Home Prices Indexed to 1990=0	Log of Gr.Bos. Home Prices Indexed to 1990=0	Log of Brookl. Prices Rel. to Gr.Boston Prices
1991-92	338,300	1990	69.9	0.000	0.000	0.000
1992-93	339,300	1991	64.23	0.003	-0.085	0.088
1993-94	341,950	1992	64.01	0.011	-0.088	0.099
1994-95	342,850	1993	65.42	0.013	-0.066	0.080
1995-96	370,800	1994	68.05	0.092	-0.027	0.119
1996-97	384,250	1995	69.56	0.127	-0.005	0.132
1997=98	414,500	1996	72.33	0.203	0.034	0.169
1998-99	451,550	1997	76.7	0.289	0.093	0.196
1999-00	523,050	1998	83.94	0.436	0.183	0.253
2000-01	601,500	1999	94.69	0.575	0.304	0.272
2001-02	667,700	2000	108.24	0.680	0.437	0.243
2002-03	756,750	2001	125.14	0.805	0.582	0.223
2003-04	837,000	2002	139.52	0.906	0.691	0.215
2004-05	903,850	2003	153.25	0.983	0.785	0.198
2005-06	1,017,100	2004	167.67	1.101	0.875	0.226
2006-07	1,023,500	2005	179.63	1.107	0.944	0.163
2007-08	986,900	2006	176.31	1.071	0.925	0.145
2008-09	1,017,000	2007	169.26	1.101	0.884	0.216
2009-10	1,022,400	2008	159.69	1.106	0.826	0.280
2010-1	1,027,300	2009	151.8	1.111	0.775	0.335
2011-12	1,059,400	2010	154.7	1.142	0.794	0.347
2012-13	1,071,750	2011	151.61	1.153	0.774	0.379
2013-14	1,114,000	2012	152.31	1.192	0.779	0.413
2014-15	1,193,600	2013	163.29	1.261	0.848	0.412
2015-16	1,298,000	2014	173.66	1.345	0.910	0.435
2016-17	1,412,200	2015	180.67	1.429	0.950	0.479
2017-18	1,502,800	2016	189.1	1.491	0.995	0.496
Years of Brookline Override	Brookl. Price $\Delta$ fr. Year Prior to Year Foll.	Gr.Bos.Pr. $\Delta$ fr. Year Prior to Year Foll.	Br.Pr. $\Delta$ Rel. to Gr. Bos. Price $\Delta$	Brookl.Price $\Delta$ fr. 3 yrs prior to 1 yr. Prior	Gr.Bos.Pr. $\Delta$ fr. 3 yrs prior to 1 yr. Prior	Br.Pr. $\Delta$ Rel. to Gr. Bos. Price $\Delta$

Votes	Override Vote	Br.Over.Vote		to Br. Ov.Vote	to Br. Ov.Vote	
1994	0.114	0.061	0.053	0.010	0.018	-0.008
1995	0.111	0.061	0.050	0.081	0.061	0.020
2008	0.010	-0.109	0.119	-0.006	-0.059	0.053
2015	0.147	0.085	0.061	0.153	0.131	0.022

Sources: Brookline Assessors for Brook.Values and Fed. Res. Bank of St. Louis for S&P/Case-Shiller.

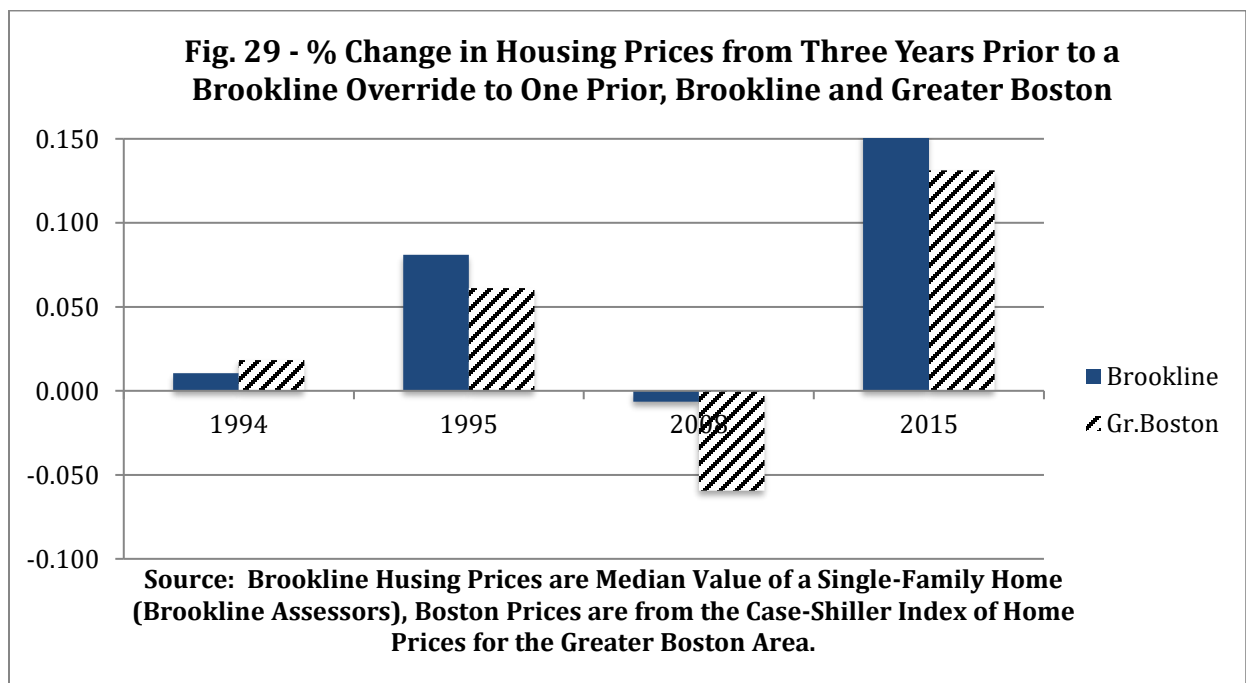
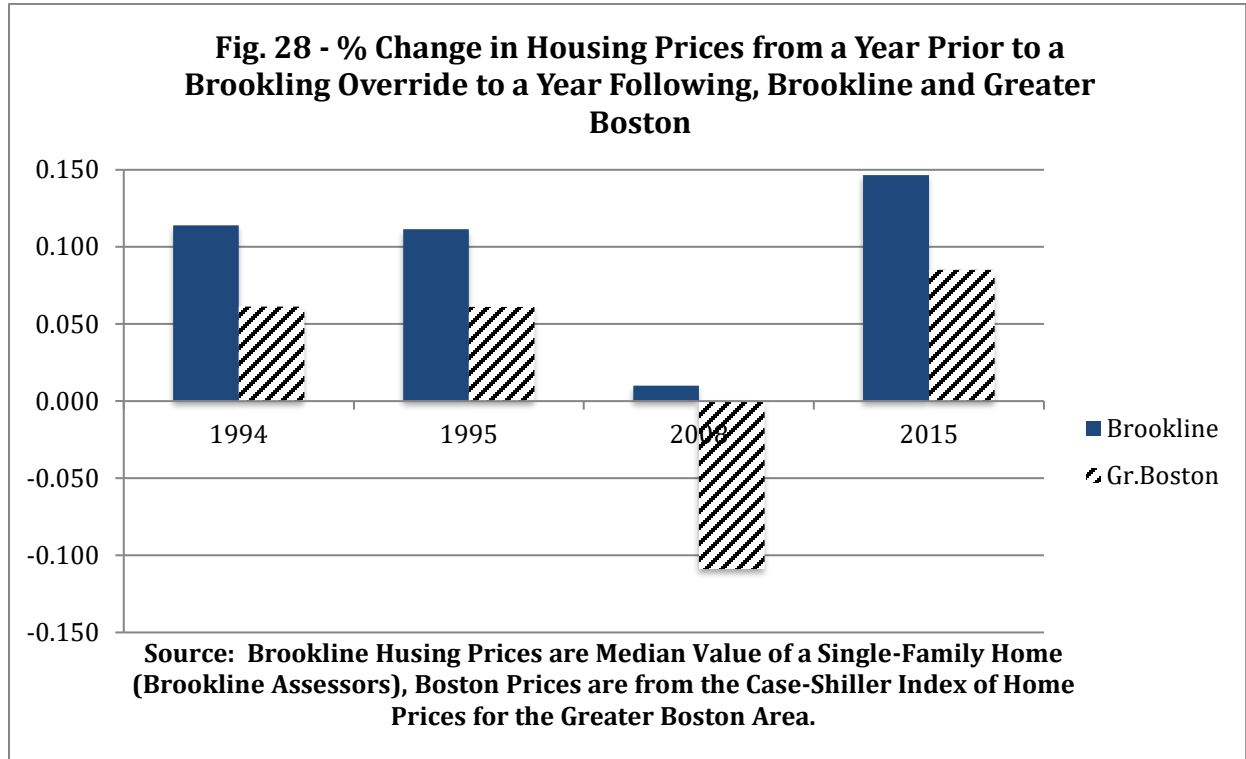
The prices are shown in chart form in Fig. 27, where equal distances represent equal percentage changes.



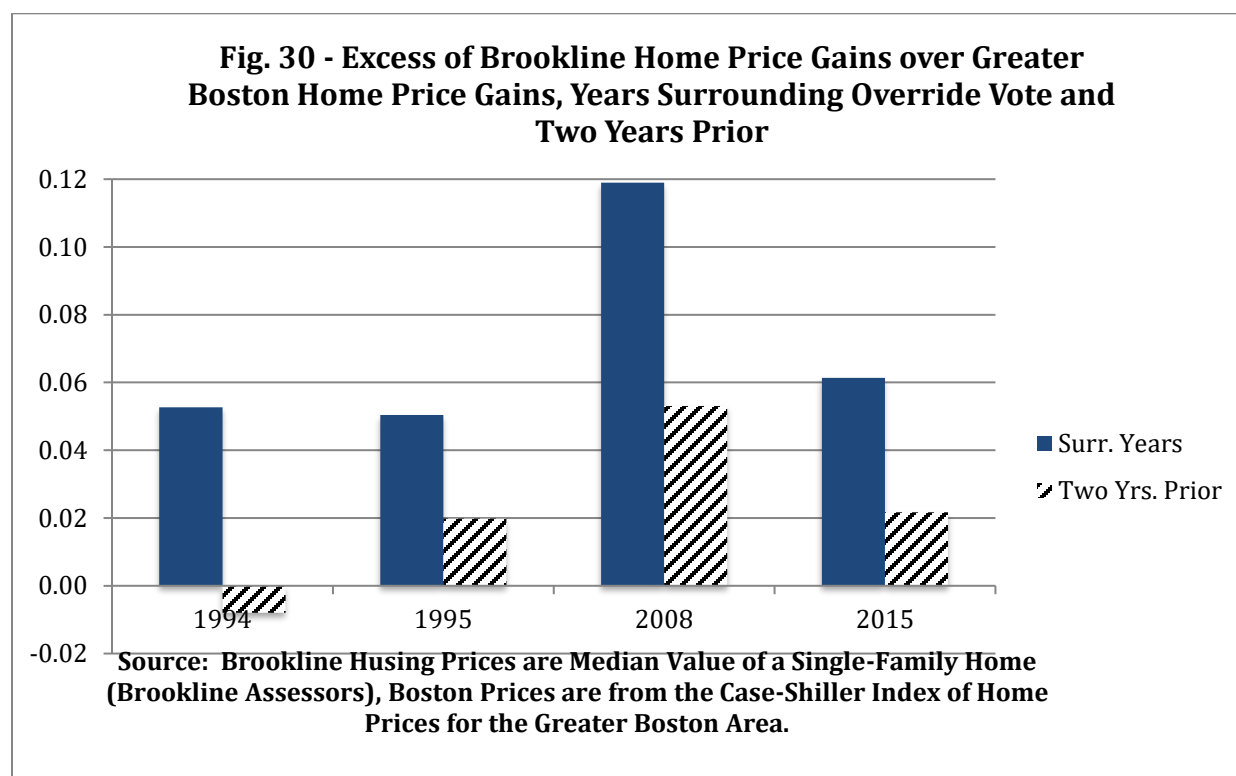
The price increases for Brookline are biased upward a bit in that the median single-family home is almost certainly bigger and better than was the case in 1990. To a somewhat lesser extent this is also the case for the repeat-sale index that is used here for Greater Boston prices. This problem of bias is substantially mitigated in looking at price changes over shorter periods, such as just prior to and just following an override vote, and then looking at changes from three years prior to one year prior to the override vote

Fig. 28 shows price changes for Brookline and for Greater Boston from one year prior to a Brookline override vote to one year following the vote. The chart shows that home prices in Brookline rose substantially more than those throughout the area over the two years just prior to and just following a successful override vote. (There were no Brookline override votes over this period that failed to receive a majority vote.)

Fig. 29 shows similar changes for a period from three years prior to an override vote to one year prior. Here we see far smaller differences between home price changes in Brookline and those of the Greater Boston area.



Finally, Fig. 30 shows the excess of Brookline Home Price Gains over Greater Boston for the years surrounding a Brookline override and for a two-year period from three years prior to two years prior. If Brookline gains are biased upward due to the use of the median-value home for a price index, then this will be the case both for the override years and the prior years. Brookline single-family homes have appreciated more in the years surrounding an override, relative to those of the Greater Boston area, than they have in other years.



### Federal Tax Law Changes and the Impact on Housing Prices and Tax Bills

The tax bill passed by Congress and signed into law this past December makes two changes that might substantially impact property values and tax bills in Brookline. First, for those who itemize, the maximum deduction for state and local taxes, including income, sales, motor vehicle excise, and real estate taxes, will be limited to \$10,000. Moreover this amount will not be indexed for inflation, under the bill as passed, but rather will stay at a flat \$10,000. For taxpayers who exceed this threshold, the allowable deduction will be reduced and even with a decrease in tax rates, as included in the recent legislation, their federal tax bills may go up. Moreover, any increase in property taxes will be an out-of-pocket increase, dollar for dollar, rather than being partially subsidized by the federal tax code.

A second provision of the recent legislation is the near doubling of the standard deduction. This will induce some homeowners to switch from itemizing to taking the standard deduction, in which case any increase in property taxes will be an out-of-pocket increase, dollar for dollar. Many of these taxpayers,



who switch from itemizing to taking the standard deduction, will get a net tax reduction due to a combination of decreases in the tax rates and the higher standard deduction. But for all of them, including those who already took the standard deduction, any increase in property taxes will be an out-of-pocket increase, dollar for dollar.

These two changes—the limit on the state and local tax deduction and the increase in the standard deduction—will make homeownership less advantageous, relative to renting, and for those who are on the margin between buying and renting will tilt them toward renting. We should expect to see a reduction in demand for single-family homes, which are designed to appeal largely to owners, and an increase in demand for rental housing. Other things being equal, we might expect the prices of single-family homes to fall and those of apartment buildings and two and three family homes to rise. The impact on condominiums is less certain, since many of them are investor-owned and thus in the rental market.

Of course other things are never equal. The tax law changes are coming precisely at a time when the pendulum for owning versus renting has been swinging back to home ownership following a move toward renting from 2008 through 2016 in the wake of the financial crisis. (U.S. homeownership rates for the first three quarters of 2017 are up slightly from the same numbers of a year ago, as reported by the U.S. Census Bureau.) It is possible that the momentum of this move back toward ownership will offset the impact of a dramatic reduction in the tax subsidy for home ownership.

Should single-family home prices fall relative to those of apartment buildings and condominiums, then real estate taxes will rise by a lower percentage for single-family homes than for apartments and condos. Single-family home owners would realize smaller gains in their home values, or even suffer declines, but to the extent this happens they would see smaller increases in their tax bills, or perhaps even declines (save for the impact of an override).

### *Municipal Request*

#### *Potential Town Expenditures Conditional on Override Funding*

1/29/2018 4:36 PM

DEPARTMENT	PROGRAM	FTE's	COST	COMMENTS
Building	Repair and Maintenance of Town Buildings		200,000	Multiple budget accounts
COA	Geriatric Social Work	0.50	37,179	Supports senior tax relief programs
Fire	Public School Inspection/Code Enforcement	1.00	91,852	
Fire	Fire Suppression	2.00	156,720	Restores prior reductions
DICR	Diversity and Inclusion Training		20,000	Available for multiple departments
Library	Brookline Village Children's Room	1.00	62,429	
Library	Facilities	1.00	91,342	
Planning	Energy/Sustainability	1.00	77,110	
Planning	Preservation	1.00	77,110	
DPW	Snow and Ice Removal		250,000	One time expense for equipment upgrades. Future year funding dependent upon priorities
DPW	Capital Equipment Replacement		300,000	Increase to current \$700,000 equipment budget
DPW	Landscape Design		17,119	
Recreation	Aquatics	1.00	58,049	Will accommodate expanded pool hours
Town Clerk	Archival	1.00	63,459	As recommended in the Strategic Asset Plan
<b>TOTAL</b>		<b>9.50</b>	<b>1,502,369</b>	

\* Cost of personnel benefits included where applicable

*FY2019 Town/School Allocations - Changes*

FY2019 TOWN/SCHOOL ALLOCATIONS - CHANGES				30-Jan-18	
	TOTAL	TOWN	SCHOOL		
PROPERTY TAXES	\$11,682,609	\$5,841,305	\$5,841,305		
LOCAL RECEIPTS	\$246,937	\$123,468	\$123,468		
STATE AID	\$1,289,619	\$644,810	\$644,810		
FREE CASH	\$197,346	\$98,673	\$98,673		
OTHER AVAILABLE FUNDS	(\$508,391)	(\$212,559)	(\$295,832)		
<b>TOTAL REVENUE</b>	<b>\$12,908,120</b>	<b>\$6,495,696</b>	<b>\$6,412,424</b>		
<b>FIXED COSTS</b>					
GOLF ENTERPRISE FUND OVERHEAD	\$27,022	\$27,022	\$0		
REC REVOLVING FUND OVERHEAD	(\$24,141)	(\$24,141)	\$0		
WATER & SEWER OVERHEAD	\$80,392	\$80,392	\$0		
REFUSE	\$155,158	\$77,579	\$77,579		
RESERVE FUND (0.75% of Prior Yr Net Rev)	\$86,645	\$33,323	\$33,323		
DEBT (non Enterprise Fund)	\$4,353,172	\$2,176,586	\$2,176,586		
CIP / SPECIAL APPROPRIATIONS / FREE CASH-SUPPORTED	(\$397,353)	(\$198,678)	(\$198,678)		
SPEC ED TUITION	\$160,000	\$180,000	\$180,000		
OTHER SPEC ED	\$440,000	\$110,000	\$330,000		
ENROLLMENT GROWTH	\$680,000	\$340,000	\$340,000		
NON-APPROP	\$368,749	\$94,375	\$94,375		
<b>TOTAL FIXED COSTS</b>	<b>\$5,909,644.2</b>	<b>\$2,886,458</b>	<b>\$3,023,186</b>		
<b>ALLOCATED FIXED COSTS</b>					
PERSONNEL BENEFITS	\$3,308,982	\$1,636,973	\$1,672,009		
UTILITIES & MISC BLDG EXP's	(\$13,294)	\$58,856	(\$72,140)		
INFO TECHNOLOGY / FINANCE APPLICATIONS	\$79,790	\$39,895	\$39,895		
PAYROLL DIVISION	(\$9,458)	(\$4,729)	(\$4,729)		
UNCLASSIFIED (AUDIT & GENERAL INSURANCE)	\$14,858	\$7,429	\$7,429		
GENERAL SERVICES (POSTAGE & TELEPHONES)	\$15,378	\$7,689	\$7,689		
<b>TOTAL ALLOCATED FIXED COSTS</b>	<b>\$3,396,266</b>	<b>\$1,746,113</b>	<b>\$1,650,152</b>		
<b>TOTAL COST INCREASE</b>	<b>\$9,305,910</b>	<b>\$4,632,572</b>	<b>\$4,673,338</b>		
<b>NET SURPLUS BEFORE COLL BARG &amp; STEPS</b>	<b>\$3,602,210</b>	<b>\$1,863,124</b>	<b>\$1,739,086</b>		
<b>SCHOOL ALLOCATION</b>					
School's Share of Net Surplus			\$1,739,086		
SPEC Costs			\$800,000		
Enrollment Growth			\$680,000		
Additional Municipal Support			\$500,000		
<b>TOTAL SCHOOL INCREASE</b>			<b>\$3,719,086</b>	<b>3.6%</b>	
<b>PERSONNEL BENEFITS</b>					
	TOWN %	SCHOOL %	TOTAL INC	TOWN	SCHOOL
PENSIONS - non-Free Cash	75.30%	24.70%	\$1,675,580	\$1,208,714	\$466,866
GROUP HEALTH	42.71%	57.29%	\$1,290,694	\$357,820	\$932,875
HEALTH REIMBURSEMENT ACCOUNT (HRA)	42.71%	57.29%	\$0	\$0	\$0
OPERS (RETIREE HEA INS) - non-Free Cash	42.71%	57.29%	\$90,385	\$10,179	\$80,206
EMPLOYEE ASSISTANCE	40.00%	60.00%	\$0	\$0	\$0
GROUP LIFE	100.00%	0.00%	\$0	\$0	\$0
DISABILITY INSURANCE	100.00%	0.00%	\$30,000	\$30,000	\$0
WORKERS COMP - non-Free Cash	95.00%	5.00%	\$0	\$0	\$0
PUBLIC SAFETY 100 MEDICAL EXPENSES - non-Free Cash	100.00%	0.00%	\$0	\$0	\$0
UNEMPLOYMENT - non-Free Cash	40.27%	59.73%	\$0	(\$43,783)	\$43,783
MEDICAL DISAB	100.00%	0.00%	\$0	\$0	\$0
MEDICARE PAYROLL TAX	38.62%	61.38%	\$222,323	\$74,044	\$148,279
<b>TOTAL INCREASE</b>			<b>\$3,308,982</b>	<b>\$1,636,973</b>	<b>\$1,672,009</b>
<b>FY19 PERSONNEL BENEFITS</b>					
	TOWN %	SCHOOL %	TOTAL	TOWN	SCHOOL
PENSIONS - non-Free Cash	75.300%	24.700%	\$22,874,765	\$17,224,698	\$5,650,067
GROUP HEALTH	42.71%	57.29%	\$31,463,720	\$13,421,329	\$18,042,391
HEALTH REIMBURSEMENT ACCOUNT (HRA)	42.71%	57.29%	\$0	\$0	\$0
OPERS (RETIREE HEA INS) - non-Free Cash	42.71%	57.29%	\$3,970,465	\$1,693,662	\$2,276,802
EMPLOYEE ASSISTANCE	40.00%	60.00%	\$28,000	\$11,200	\$16,800
GROUP LIFE	100.00%	0.00%	\$145,000	\$145,000	\$0
DISABILITY INSURANCE	100.00%	0.00%	\$46,000	\$46,000	\$0
WORKERS COMP - non-Free Cash	95.00%	5.00%	\$1,450,000	\$1,377,500	\$72,500
PUBLIC SAFETY 100 MEDICAL EXPENSES - non-Free Cash	100.00%	0.00%	\$200,000	\$200,000	\$0
UNEMPLOYMENT - non-Free Cash	40.27%	59.73%	\$200,000	\$80,537	\$119,463
MEDICAL DISAB	100.00%	0.00%	\$40,000	\$40,000	\$0
MEDICARE PAYROLL TAX	38.62%	61.38%	\$2,445,551	\$932,733	\$1,512,818
<b>TOTAL</b>			<b>\$62,863,500</b>	<b>\$35,172,659</b>	<b>\$27,690,841</b>
<b>FY18 PERSONNEL BENEFITS</b>					
	TOWN %	SCHOOL %	TOTAL	TOWN	SCHOOL
PENSIONS - non-Free Cash	75.55%	24.45%	\$21,199,185	\$16,015,984	\$5,183,201
GROUP HEALTH	43.30%	56.70%	\$30,173,026	\$13,063,509	\$17,109,517
HEALTH REIMBURSEMENT ACCOUNT (HRA)	43.49%	56.51%	\$0	\$0	\$0
OPERS (RETIREE HEA INS) - non-Free Cash	43.49%	56.51%	\$3,880,080	\$1,683,483	\$2,196,596
EMPLOYEE ASSISTANCE	40.00%	60.00%	\$28,000	\$11,200	\$16,800
GROUP LIFE	100.00%	0.00%	\$145,000	\$145,000	\$0
DISABILITY INSURANCE	100.00%	0.00%	\$16,000	\$16,000	\$0
WORKERS COMP - non-Free Cash	95.00%	5.00%	\$1,450,000	\$1,377,500	\$72,500
PUBLIC SAFETY 100 MEDICAL EXPENSES - non-Free Cash	100.00%	0.00%	\$200,000	\$200,000	\$0
UNEMPLOYMENT - non-Free Cash	62.16%	37.84%	\$200,000	\$124,320	\$75,680
MEDICAL DISAB	100.00%	0.00%	\$40,000	\$40,000	\$0
MEDICARE PAYROLL TAX	38.62%	61.38%	\$2,223,228	\$858,689	\$1,364,539
<b>TOTAL</b>			<b>\$59,554,518</b>	<b>\$33,535,686</b>	<b>\$26,018,833</b>

### Debt Service FY18 and FY19

	FY18	FY 19
Prior Year Levy	\$203,036,517	\$210,376,447
2-1/2% Increase	\$5,075,913	\$5,259,411
New Growth	\$2,264,017	\$2,587,500
Increase	\$7,339,930	\$7,846,911
Tax Levy	\$210,376,447	\$218,223,358
Old BHS	\$1,020,800	\$988,200
FY 18 Total Tax Levy	\$211,397,247	
Devotion @ 5%		\$3,517,539
New BHS @ 5%		\$328,000
FY 19 Debt Exclusion		\$4,833,739
FY 19 Total Tax Levy		\$223,057,097
FY19 Increase		\$11,659,850
% Increase	3.60%	5.50%

#### School Programs Subcommittee

##### *Financial Assistance Policy*

Financial assistance is provided by the schools for reduced-fee or free lunch under guidelines provided by the U.S. Department of Agriculture. The schools have also provided assistance for other programs for which fees are charged, such as field trips, athletics, or instrumental music, but until recently the aid for non-lunch programs was distributed in a rather haphazard fashion.

In some cases, the fee charged was more than the cost of the program so as to provide funds for those who could not come up with the money. Some parents voluntarily paid more to help those who could not pay. In other cases, students would forego a program such as instrumental music or an athletic team

because they did not have the money and either did not know who to ask or did not want to ask. Moreover, it was never quite clear that those who received the aid were those who most needed it. Nor was it clear who might have been left out due to a failure to ask.

In the past year the school department has adopted substantial reforms. Now parents file a single application for financial assistance and a student who qualifies is marked paid, just as is any other student whose parents have paid the full price. We are now using the Federal poverty guidelines as criteria for assistance. All parents of students who do not receive financial aid will now be charged just the cost of the program, but they will still be encouraged to make voluntary contributions to help offset the costs of those who receive aid.

We applaud the school department for instituting a centralized financial assistance process for financial aid applications and for providing both the information needed and the application form online as well as by way of a paper copy. We applaud them for finding a way to do so in a completely confidential manner. We urge the school department to continue in its efforts to provide assistance to all those with demonstrated need and to deny aid to those without a demonstrated need.

The school department estimates that approximately 9% of our students will receive financial assistance of some amount, with an average of \$250 per student, for a total annual cost of \$175,000.

### *School Rental Properties*

Due to severe space constraints in school buildings, the town leases space at a number of locations, at an annual cost of \$1,165,000, plus the cost of any utilities or other services as specified in the leases. The locations include 62 Harvard Street, 24 Webster Place, space at two temples, the Methodist/Korean Church near Town Hall, and the Brookline Teen Center. The costs are accounted for in the Capital Improvements Program section of the town budget.

Superintendent of Schools Andrew Bott, Deputy Superintendent for Administration and Finance Mary Ellen Dunn, and School Committee Chair David Pollak have expressed their view that ownership of buildings is highly preferable to leases. There are safety concerns with students walking to off-site spaces, leases reduce flexibility in responding to changing needs, and costs are high due to redundancy in operating out of many small locations.

The Override Study Committee recommends that where space needs can be identified as long term that every effort be made to move toward ownership rather than renting, provided that ownership can be demonstrated to provide the needed services at either lower cost or at nearly the same cost.

### *Special Education Program*

Special Education (Students with Disabilities or “SWD”) students are those with Individual Education Plans (IEPs). A student is eligible for an IEP when he or she requires “specially designed instruction” in

order to access the curriculum. Brookline is responsible for the education of children with IEPs from age 3 to age 22.

Section 504 accommodation refers to the federal Rehabilitation Act of 1973, the precursor of the ADA. Section 504 students do not need special instruction to access the curriculum. The accommodations are often small changes that might include sitting up front near the teacher, taking frequent breaks, or extra time on tests. The additional costs for Section 504 students may be modest or even minimal if the only requirement is a change in that student's classroom routine, but costs for some types of assistance are substantial. Future budgets will break out Section 504 costs as a separate program.

Section 504 students may be eligible for free transportation even when they live close to school, depending on their particular disability.

The Special Education and 504 Accommodation programs are administered by the Office of Student Services. The office is headed by a Deputy Superintendent of Student Services and in FY18 it included a total of 3.35 FTEs at a cost of \$340,069.

The FY18 budget includes a total of 358.9 FTEs at a cost of \$27,621,601, so the total budget for special education in FY18 was \$27,991,670 not including the cost of benefits, or about a quarter of the total amount allocated to PSB by Town Meeting. The cost of benefits, which is included in the Town operating budget dollar, add approximately \$10,980 per FTE, or an additional \$3,978,000 (approx.) to the cost of special education.

PSB's budget projects assume that the number of students with IEPs and 504 accommodation requirements will increase in synch with the overall increase in enrollment. Looking forward three years, PSB does not anticipate adding SWD staff beyond a proportional increment due to enrollment increases. The cost increases associated with SWD for FY19 through FY 21 are related to increases in pay as staff members move up through steps and lanes, and to increases in paraprofessional pay that were included in the 2017 labor contract and were widely supported by Brookline residents.

One of the commonly heard statements about the population of SWD students is that families move here in disproportionate number to take advantage of Brookline's excellent programs. In actuality, the percentage of SWD students in Brookline is in keeping with state-wide averages and with peer communities. It is true, however, that Brookline's proximity to the Longwood Medical Area attracts families whose children have medical needs. Those children may be more expensive to support in school, but Brookline is not a "magnet" for parents with special needs.

Another commonly heard statement is that the number of SWD students is METCO is disproportionate, and that Brookline bears a high cost. Brookline does pay for in-district costs of METCO students, but the out of district costs of students are covered by the school districts in which they reside, not by the host community. (This applies to both Materials Fee and METCO students.)

Out-of-district tuition

Currently approximately 60 students are placed out of district in programs for which Brookline pays tuition costs. Over the last several years, Brookline has added in-district programs in a concerted effort to reduce the number of Special Ed students that are placed out of district. In 2016, the Advisory Committee estimated that the net savings from this initiative was approximately \$1 million per year. Those savings continue annually, but the effort has achieved as much of a reduction as is likely to occur. We do not anticipate further reductions in out of district placements, and in fact enrollment growth may result in a slight increase. Tuitions for out-of-district placement are projected to rise by 5% each year.

PSB's administration has been working to identify redundancies in the SWD program. For example, there may be similar programs in more than one school that could be combined. In response, some slots have been combined, thereby freeing a SWD staff member to pick up another assignment. This process is described in detail on Page 118 of the FY18 PSB budget. The process and related efforts at rationalizing the delivery of SWD is likely to be a factor in keeping the total number of FTEs at FY 18 levels in FY19.

### Recommendations

SWD students account for approximately 10% of the student population and 25% of the operating cost. State support for SWD – “circuit breaker” funding - is well below the actual costs. The state law mandating SWD programs sets the state reimbursement level at 75%, but the actual amount appropriated by the legislature is almost always lower, and has dropped to 70% from 72% in FY17 and to 65% in FY18.

Lobbying the governor and legislature for statutory support of SWD at 75% should continue to be a top priority for Brookline's elected leaders and senior administrators. We recommend that the School Committee and Select Board work together with the four members of the Massachusetts House of Representative and with our State Senator to increase SWD funding to the statutory level.

Every school district in the state feels the impact of underfunding by the legislature. It would be best to work together with other communities and through the Mass. Municipal Association to help make the case for more adequate support.

### *School Transportation*

There are three categories within the operating override request that deal with school transportation. The first, is a straightforward reflection of maintaining level service. There was a personnel change that saved money. There was a contractual increase that will cost more money. There were services that were not accurately attributed to the correct line item in the budget and will thus reflect an increase in this line item (although it will be a budget neutral). These are described in detail below and taken from the BPS FY 2019 Budget Document pages 225-226:

Budget Changes for Transportation:

- The salary accounts reflect the services of the Transportation Coordinator and one Bus Monitor. The decrease reflects the \$10,146 savings from hiring new Transportation Coordinator with less experience than one who retired on June 30, 2017. Services: Regular Education (AKA - Big Yellow Bus)
- \$10,800 Level Service -Big Yellow School Bus Service reflects a \$10,800 (3.7%) contractual increase for the same level of service, 4 buses, as last year. PSB has used 4 buses to provide service in the recent past.
- \$42,760 Level Service - the following programs, have historically run and have been paid for, but have lacked a sufficient dedicated funding source or line item to cover these expenses. The total additional cost for these programs is estimated to be \$42,760. Middle school sports that do not have a user fee Cross Country and Track that do not have a dedicated funding source in the transportation budget for this expense estimated to be \$10,560. The transportation schedules to and from DPW day \$1,680. The Eighth grade PEEP day is estimated to cost \$2,880. Other middle school sports estimated to cost \$27,720. The Transportation Office does not set the game schedule, and thus has no way of controlling the budget for this particular service, so budgeting for it is probably best suited with the Athletic Department.

The second category within the operating override request for transportation funding covers transportation for special education students who's Individual Education Plans (IEPs) require our district to provide transportation, as well as students with mobility issues who meet Section 504 criteria. Because special education transportation services are based on IEPs, PSB are not in complete control of the costs. The numbers of students and varying in-district and out-of-district programs can ebb and flow, thus we must meet a contractual obligation and this is viewed by the Director of Operations as meeting level services.

- Level Service - Special Education - Extended School Year programs In and Out of District - The FY19 budget request reflects a 3% increase, \$5,500 over the actual Summer 2017 Services of \$183,831. The FY18 budget request for summer transportation was \$172,532, the FY19 request is a \$16,299 increase over last year's budget build, or a 9.4 % increase in this portion of the \$1,803,599 budget.
- The In-District increase of \$282,449 is based on the September invoice for In-District services. PSB increased the total number of vans by 36%, or 4 more vans from 11 to 15, and are projecting to cost \$220,700 more than the \$745,700 budgeted for this category for FY18. This includes a contractual increase and one additional vehicle for the year, at \$39,301, to reflect the impact enrollment growth will have on the number students receiving special education services during FY19.
- The Out-Of-District transportation services of \$1,194,516 is built on a contractual increase and one additional projected placement of \$40,500 that is likely add to our out-of- district expenditures or cover additional monitors. This is \$88,488 above last year's budget build or an 8% increase to this portion of the \$1,803,559 budget.

The final transportation line item in the override is for an expansion of services to support additional buses for Brookline High School who live south of Boylston Street (Route 9). Within this category, there are two components: fee for bus services to provide high school students access to transportation to get to and from school each day as well as bus service to transport Brookline high schoolers to athletic practices.



The demand for consistent transportation service to and from Brookline High School has grown with the student population in recent years. In November 2017, the Public Transportation Advisory Committee (PTAC) worked with the A&F to better quantify the interest in increasing school bus services, especially in south Brookline. The survey also provided information about how students get to and from BHS this year, as well some feedback on potential user fee.

The cost to add a bus is \$420 per day, or \$75,600 for the school year. A typical big yellow school bus can seat about 50-55 high School age students per trip. With the survey indicating a willingness to pay a \$250 fee and conservatively estimating for financial assistance, 40 user fees at \$250 would be \$10,000 to offset the cost of this potential voluntary service. That would be user fee offset the cost by range of 13% to 17%. If the bus could make two runs in the morning and two in the afternoon, the potential user fee offset would double to a range of 26 to 34%. The challenge of having one bus make two runs is that the first run would have to start about an hour before classes begin, and the last run would start about an hour after classes end.

The cost of bus service to provide Brookline High Schoolers transportation to athletic practice is approximately \$300/day for 145 days. The ask is approximately \$130,500 in year one, an additional \$6,525 in year two, and an additional \$6,851 in year three, for a total of \$143,876.

Table

General Fund	FY 18	FY 19	FY 20	FY 21	Totals
Exp. Type	Budgeted	Increase	Request	Request	
Services- Reg	\$280,800	\$53,560	\$55,702	\$57,930	\$167,192
Services- SWD	\$1,803,559	\$234,826	\$9,393	\$9,769	\$253,988
New Service- BHS 1 <sup>st</sup> bus	\$0	\$80,000	\$4,000	\$4,200	\$88,200
New Service- BHS 2 <sup>nd</sup> & 3 <sup>rd</sup> bus	\$0	\$50,000	\$2,500	\$2,625	\$55,125
BHS Athletics	\$0	\$130,500	\$6,525	\$6,851	\$143,876
Total Transportation Ask		\$548,886	\$78,120	\$81,375	\$708,381

Subcommittee work summary: The School Programs Subcommittee of the OSC reviewed materials submitted by BPS, interviewed BPS staff including Mary Ellen Dunn and Matt Giles about transportation at the schools, and also reviewed reports submitted by the Public Transportation Advisory Committee, which is a subcommittee of the Transportation Board. Survey data was supplied and reviewed to verify the demand that is driving the request behind the BHS transportation line items.

Recommendation: The Override Study Committee recommends that any additional new service, such as the BHS transportation, be included in the larger ask to the voters. It should not be included in the base ask. If the voters want to fund this additional transportation, the Override Study committee encourages BPS to consider a fee of \$400 per student instead of the \$250 that was originally proposed.

### *Intervention Programs and Practices (General Education)*

FY 19	FY 20	FY 21	Total
\$100,000	\$2,000	\$2,040	\$104,040

- Prior to a student needing an IEP, intervention programs, including staff, are available to identify potential issues early and prevent a student from falling behind
- These programs are substantially less expensive than the IEP programs
- Includes money for Instructional Leadership Teams to form (existing staff, but time outside of the classroom)
- New mandates from pending state legislation for dyslexia screenings for third graders

Subcommittee Work Summary: The School Programs Subcommittee of the OSC interviewed BPS staff Mary Ellen Dunn, Superintendent Andrew Bott, Sam Zimmermann, Nicole Gittens to understand the current practices related to early intervention for reading, math, dyslexia, etc. Materials were presented for review to consider the cost implications of not providing intervention.

Recommendation: The OSC realizes that by investing in intervention, we can attempt to curb the costs that accompany special education. There are no new FTEs involved in this line item. It is for existing staff to work hours outside of their existing schedule.

### *Professional Development*

FY 19	FY 20	FY 21	Total
\$190,000	\$280,000	\$5,676	\$475,676

- The \$190,000 in FY19 is for two FTEs: an Administrator and an Administrative Assistant
- The \$280,000 in FY20 is for an additional day of professional development
- This ask would add an extra day for staff workshops to address CEU (continuing education) credits, license renewals, building capacity, specific program skills such as math, and closing the gap on equity, race, inclusion, and achievement
- The \$5,676 in FY21 is the anticipated cost of living adjustment (COLA)
- 

Subcommittee Work Summary: The School Programs Subcommittee of the OSC interviewed BPS staff Mary Ellen Dunn, Superintendent Andrew Bott, and Head Master Anthony Meyer in order to understand the current practices for professional development. Currently there is only one staff day dedicated for staff professional development in the budget. The ask is for two FTEs which would be used to help coordinate professional development activities for the rest of the staff. The rest of the ask is for staff time outside of regular hours.

Recommendation: The OSC applauds BPS for advocating for additional staff training time. The additional FTE request could be included in the larger ask.

### *Restorative Justice*

FY 19	FY 20	FY 21	Total
\$130,000	\$2,600	\$2,652	\$135,252

- The \$130,000 in FY19 is for two FTEs that would be dedicated to address issues regarding restorative justice. Restorative Justice/Restorative Practices are designed to improve school climate, build strong community, and improve outcomes for students. Through effective implementation, restorative practices support building strong relationships, improved decision-making, and effective resolutions for conflicts that may occur in schools. The two educator facing staff would lead professional development supporting the use of restorative practices district wide. These staff would also support student intervention, bullying prevention and investigations, and use of appropriate disciplinary consequences in schools.
- In 2017, there were a number of videos of students (both former and current) of BHS where derogatory names were used, restorative justice practices will help the school community confront these difficult topics and provide an open, safe, and productive path forward

Subcommittee Work Summary: The School Programs Subcommittee of the OSC interviewed BPS staff Mary Ellen Dunn, Superintendent Andrew Bott, and Head Master Anthony Meyer in order to understand the current atmosphere facing our students. The number of hate and bullying incidents are up nationwide and Brookline is no exception.

Recommendation: The OSC applauds BPS for identifying resources to tackle these issues to allow for the community to heal and engage in productive dialogue. Bullying has severe consequences and we owe it to our students to provide resources to address it.

### *World Language Program*

The World Language Program was funded by the 2008 override, and it enabled PSB to begin teaching languages in the first grade rather than in the sixth. The OSC raised the question of how the program has been measured and whether it has been effective.

Brookline's K-8s offer different languages – French & Spanish at some, Mandarin and French at others. Brookline High adds Italian, Latin & Japanese. The foundation of starting a second language in 1st grade is based on research showing that learning a second language earlier in a student's school career results in increased proficiency. World Languages replaced the pre-2008 program of starting a language at 6th grade.

The goal is for children to be judged proficient in a second language by the time they leave high school. In 2000, prior to the K-5 program, Grade 9 students on average reached a Novice Mid \* level with about 50% reaching a Novice High. Now, Grade 9 students on average reach an Intermediate Mid \* level, with 50% reaching an Intermediate High level or higher, a very substantial increase in student proficiency compared to the cohorts that started a second language in 6th Grade (that is, prior to the inception of World Languages in 2008).

It is worth noting that not just language, but also cultural education occurs. Students who achieve an intermediate level of proficiency are often comfortable enough with their second language to spend a summer or a semester abroad.

The Schools' 2018-201 override request does not include any additional funding for the World Language Program. Based on the results provided to the OSC, we strongly commend the funds allocated to World Languages as being money well spent.

### School Population, Capital and Programs

#### *Summary*

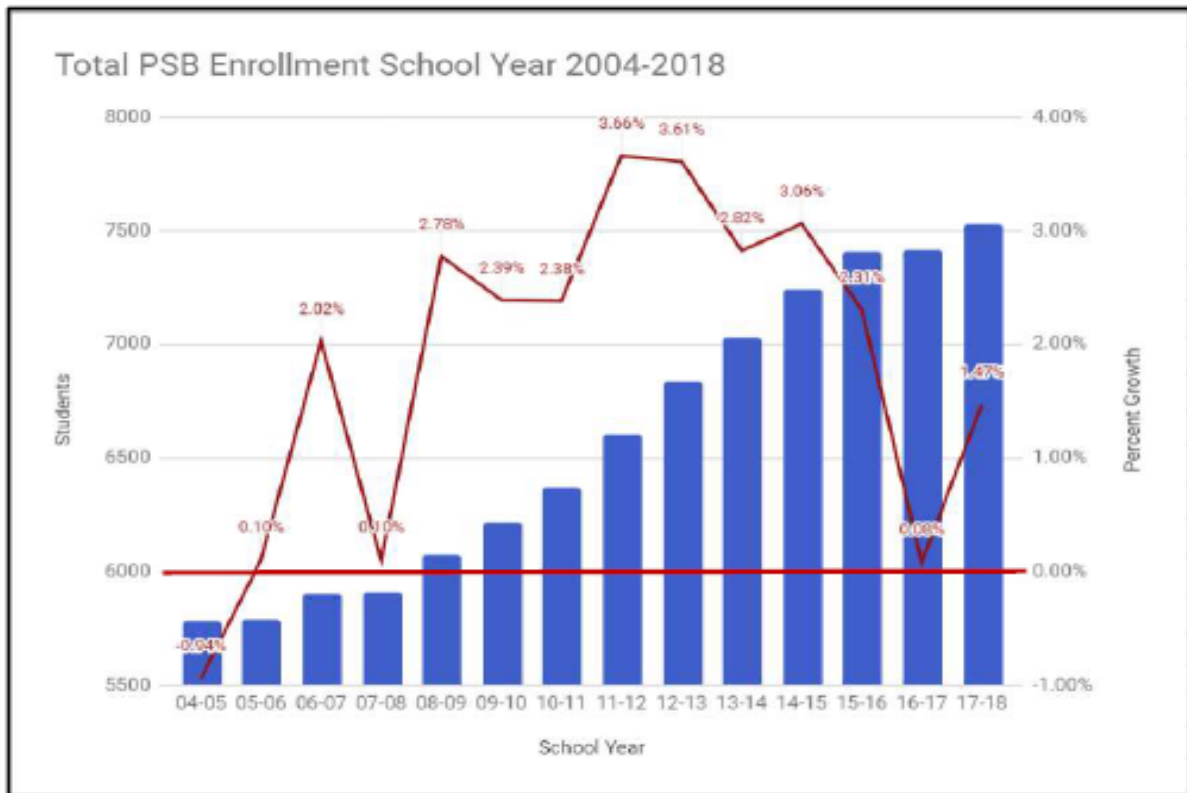
Despite the 2015 Budget Override efforts the Public School of Brookline (PSB) continue to experience budget pressures due to continued increases in enrollment, rising special education costs, teacher salaries moving through step progressions, and collective bargaining. Enrollment pressures have an additional impact on capital, as the schools no longer have the physical capacity (both from a K-8 and high school standpoint) to keep up with the rising student population. Since the 2003-2004 school year, the PSB have added 1692 students into the system, a rise of 29%. This trend is projected to continue through the 2021-2022 school year when taking currently approved/in progress housing projects into account. Given this trend, both operating and capital costs are increasing. The fact remains that enrollment continues to increase showing no signs of reversing.

#### *Current Enrollment*

Basic economic supply and demand principles continue to be the primary issues facing the PSB - with supply being the space available for students as well as school employees, and demand being the rising student enrollment numbers. In a steady state scenario, the number of students entering the system will be offset by equal numbers of students exiting the system. This however has not been the case as can be seen by the following data:

School Year	Kindergarten	12th Graders	Difference	System Enrollment	YOY Difference	YOY Percentage
03-04	396	461	-65	5834		
04-05	418	479	-61	5779	-55	-0.94%
05-06	485	478	7	5785	6	0.10%
06-07	550	475	75	5902	117	2.02%
07-08	495	477	18	5908	6	0.10%
08-09	552	450	102	6072	164	2.78%
09-10	596	437	159	6217	145	2.39%
10-11	545	431	114	6365	148	2.38%
11-12	602	459	143	6598	233	3.66%
12-13	666	432	234	6836	238	3.61%
13-14	631	403	228	7029	193	2.82%
14-15	685	473	212	7244	215	3.06%
15-16	633	446	187	7411	167	2.31%
16-17	582	479	103	7417	6	0.08%
17-18	609	506	103	7526	109	1.47%
Overall increase from 03-04 to 17-18					1,692	29.00%

(Data from the 2017 Preliminary Enrollment Projection Public School of Brookline 12/22/2017)



(Data from the 2017 Preliminary Enrollment Projection Public School of Brookline 12/22/2017)

The red line in the graph above shows this continued increase as a percentage. In the scenario where students could only enter the system as incoming kindergartners and exit the system as graduating 12<sup>th</sup> graders, if every year the incoming kindergarten class matched the outgoing graduating 12<sup>th</sup> grade class the red line would be flat at 0% every year. Since the 2003-2004 school year, the PSB have added 1692 students into the system, a rise of 29%. On average, there were 550 to 600 students in each incoming kindergarten class from FY 2006 onwards. Prior to that year, incoming classes averaged 400 to 425 students. During the same period, the School Committee embarked on a long-term policy of creating equity across all eight K-8 schools, which required allocating additional resources to schools that had previously been less well supported. Thus the revenues available to the School were stretched by a change in policy and (more importantly) by a change in enrollment levels. Data for 2016-2017 shows a drop in kindergarten enrollment. The Schools' analysis is that kindergarten enrollment declined partly because some children born late in the year and who would have gone to Devotion were held out by their parents while Devotion was being renovated. In addition, a significant number of rental apartments in Hancock Village were taken off the market while they were being renovated. However, for the 2017-18 School Year, kindergarten enrollment numbers are back over 600 students.

From a supply side the schools are currently limited by a number of factors, including target class size in students, physical classroom sizes, a targeted lunch time period, and physical shared spaces. The Town School Committee has set a policy for a target class size of 21 students/class in the Brookline K-8 based on research studies. Class size at BHS is targeted for 18-20 students for standard level classes, 25 for honor classes, 24 for science classes (due to physical lab space restrictions), and 27-28 for advanced classes. The PSB K-8 school have approximately 239,252 square feet of classrooms currently spread across eight elementary schools. The School Committee has targeted no more than three lunch periods during the school day between 11:30 A.M. and 1:00 P.M., however all cafeteria, gymnasium, library, nurse offices, and other community spaces across the eight K-8 schools remain almost unchanged from ten years ago.

School	Enrollment	Classroom Sq.Ft.	# Classes	Classes With >21 Students	Avg Students /Class	Avg Class Sq.Ft./Student	Cafeteria Seats	Lunch Periods Needed If Using All Cafeteria Seats	# Lunch Periods Today	1st Lunch Start	Last Lunch End	Time Per Lunch Period (m)
Baker	763	33325	39	20.51%	19.56	43.68	200	3.82	4	11:00 AM	1:10 PM	0:32:30
Devotion	801	43473	43	0%	18.63	54.27	350	2.29	3	11:00 AM	12:55 PM	0:38:20
Driscoll	613	24854	28	46.43%	21.89	40.54	150	4.09	5	10:20 AM	12:53 PM	0:30:36
Heath	534	25327	27	29.63%	19.78	47.43	212	2.52	6	10:50 AM	1:20 PM	0:25:00
Lawrence	722	30315	35	25.71%	20.63	41.99	138	5.23	7	11:00 AM	1:30 PM	0:21:26
Lincoln	578	26875	28	21.43%	20.64	46.50	184	3.14	5	10:20 AM	12:45 PM	0:29:00
Pierce	859	29971	41	46.34%	20.95	34.89	200	4.30	5	10:25 AM	12:55 PM	0:30:00
Runkle	612	25198	27	62.96%	22.67	41.17	186	3.29	7	11:00 AM	1:05 PM	0:17:51
<b>Total</b>	<b>5482</b>	<b>239338</b>	<b>268</b>	<b>29.85%</b>	<b>20.46</b>	<b>43.66</b>	<b>1620</b>	<b>3.38</b>	<b>42</b>	<b>10:44 AM</b>	<b>1:04 PM</b>	<b>0:03:20</b>

(Data from the 2017 Preliminary Enrollment Projection Public School of Brookline 12/22/2017)

#### Table Columns

- Enrollment: Total enrolled students as of 10/6/2017
- Classroom Sq.Ft.: Total square feet of classrooms as measured by PSB
- # Classes: The sum of all K,1,2,...,8 classes in that school
- Classes With >21 Students: Number of classes that have more than 21 students as a percentage of all classes in that school
- Avg Students/Class: Number of students per class if all students in that school were split across all available classrooms (43 sq.ft./student is the MSBA recommendation)
- Avg Class Sq.Ft./Student: All classroom space in a school divided by number of students
- Cafeteria Seats: Max number of seats in the cafeteria as set by Fire Code
- Lunch Periods Needed If Using All Cafeteria Seats: Number of lunch periods needed if all cafeteria seats were filled each lunch period
- # Lunch Periods Today: Number of lunch periods today
- 1st Lunch Start: Time when the first lunch starts
- Last Lunch End: Time when last lunch ends
- Time Per Lunch Period (m) : Time in minutes of a lunch period (purely based on end times minus start times divided by number of lunch periods)

#### Notes

- Classroom sizes vary, sizes above are total for a school. Some rooms will be bigger, some will be smaller

- Shared gym and other spaces are not included, but could have a similar impact like cafeteria space
- 43 sq.ft. of classroom space/student is the MSBA recommendation
- Max number of seats in the cafeteria is set by the Brookline Fire Department/Fire Code

The above table shows that on average the PSB elementary schools are at capacity for number of students per classroom, and have already exceeded the targeted bounds for number of lunches and overall lunch time window at all schools. Note that the above is already factoring in contributions from expand in place additions that started in 2008 including:

- 6 classrooms built at Heath and cafeteria expanded
- 4 classrooms built at Lawrence
- 2 modular classrooms added at Baker
- 11 BEEP classes moved out of K-8 buildings into leased commercial space
- 4 classrooms in leased commercial space for Pierce
- 1 gymnasium and 1 small gymnasium space at Brookline Teen Center
- 1 brand new school will be built at Devotion to add 12 classrooms
- 4 classroom conversions from existing spaces in FY'18
  - Driscoll fourth section of Grade 3
  - Lawrence fourth section of Grade 6
  - Pierce fifth section of Grade 4
  - Devotion fifth section of Grade 6

These final four conversions are likely the last classroom spaces available without leasing new space. More than fifty staff members have been moved out of BHS into leased space to make room for students, as well as the Help Desk and Educational Technology groups.

Note that the average data values shown above are just that - each classroom and each school has a different number of actual students and student capacity. The PSB work to try and balance out the enrollment across the eight schools based on where students live with a goal of having students live as close to their school as possible, but even with the use of buffer zones that allow administrators to potentially shift around enrolling students, in practice with 5482 students it is impossible to balance everything out perfectly. The high school currently has 2,065 students enrolled. Based on a maximum capacity of 2150 and a desired “built for 95% utilization” BHS is currently at capacity.

Actual Enrollments in the K-8 Public School of Brookline By Section:

School	Section	K	1	2	3	4	5	6	7	8	School	Section	K	1	2	3	4	5	6	7	8
<b>Baker</b>	1	20	22	19	22	17	20	20	19	12	<b>Lawrence</b>	1	23	19	23	21	21	21	19	19	20
<b>Classes &gt;21</b>	2	19	20	19	23	18	20	20	19	18	<b>Classes &gt;21</b>	2	22	19	23	21	21	20	18	21	20
<b>20.51%</b>	3	20	21	19	21	16	20	22	20	18	<b>25.71%</b>	3	21	19	24	22	20	21	20	20	19
	4	19	22	19	22	16	20	23	18	18		4	22	20	21	22	21	22	18		20
	5				22		20			18	<b>Lincoln</b>	1	22	20	20	23	20	21	19	17	20
<b>Devotion</b>	1	18	16	19	19	19	19	19	19	18	<b>Classes &gt;21</b>	2	22	21	21	24	19	23	20	16	20
<b>Classes &gt;21</b>	2	19	17	19	18	19	19	19	20	18	<b>21.43%</b>	3	21	20	21	23	20	21	21	21	21
<b>0.00%</b>	3	19	17	20	19	20	19	18	20	19		4					21				
	4	17	18	19	18	19	18	19	20	20	<b>Pierce</b>	1	22	19	22	21	23	21	20	21	21
	5	19	17	20	18	19	18	19			<b>Classes &gt;21</b>	2	22	20	23	22	23	22	19	21	21
<b>Driscoll</b>	1	20	21	21	20	21	24	25	25	21	<b>46.34%</b>	3	21	19	22	22	23	20	20	22	20
<b>Classes &gt;21</b>	2	20	20	23	19	19	24	25	24	20		4	22	18	23	22	23	22	17	20	21
<b>46.43%</b>	3	21	22	23	22	21	25	25	20	23		5	23	18	21	20	23				
	4				20						<b>Runkle</b>	1	21	20	21	23	26	25	21	21	23
<b>Heath</b>	1	18	16	18	25	21	23	19	20	19	<b>Classes &gt;21</b>	2	20	21	21	24	26	24	22	22	24
<b>Classes &gt;21</b>	2	19	15	22	23	20	23	18	21	18	<b>62.96%</b>	3	21	20	24	24	26	22	22	25	23
<b>29.63%</b>	3	18	14	21	24	21	22	18	22	16	<b>Total</b>	<b>5,490</b>	<b>611</b>	<b>571</b>	<b>631</b>	<b>689</b>	<b>621</b>	<b>660</b>	<b>585</b>	<b>553</b>	<b>569</b>

(Data from the Public School of Brookline 10/6/2017)

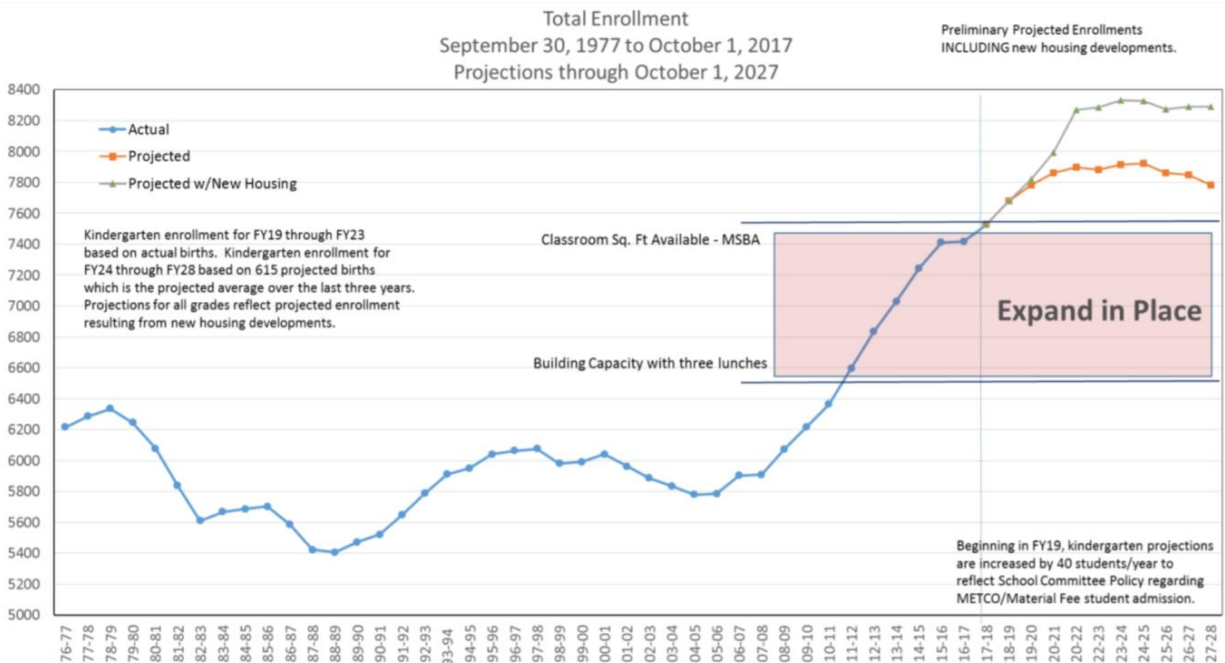
### *Future Enrollment*

Projecting enrollment into the future is an inexact science at best. The school employs a birth to cohort survival rate using progression rates that are recalculated each year. Current kindergarten enrollment rates are compared to birth rates of mothers living in Brookline. In addition, the schools look at many other studies and methodologies to vet out their models, including studying housing capacity (how many students live in what types of housing), third party evaluations such as MGT of America (an educational consulting firm), and their own models year to year. New construction projects are considered in the modeling (PSB considers projects that have at least pulled permits to begin the construction process) and non-resident students have also been added (an average of 20 METCO and 20 Materials Fee) to the kindergarten enrollment projections for FY'19. Keep in mind that some 12th grade METCO and Material Fee students will graduate this May - the projections do not include an overall increase in METCO (set at 300) and Material Fee (under 200) students.

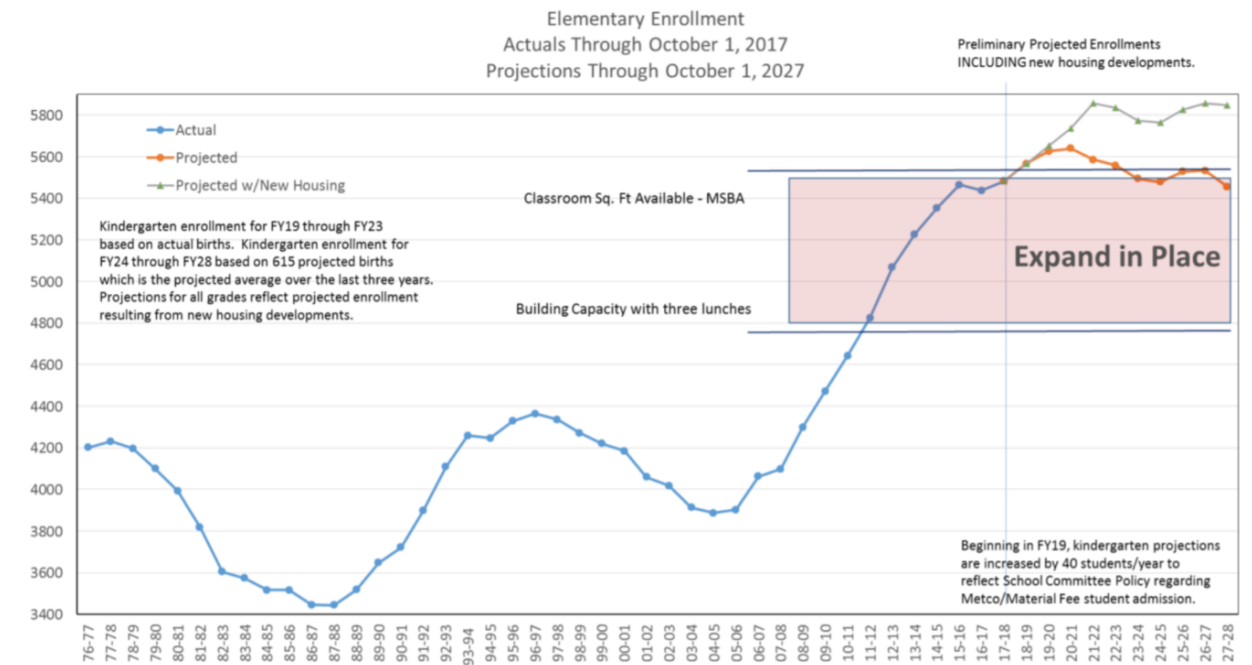
The following graphs show the enrollment projections out to School Year 2027-2028, starting with total enrollment, followed by just K-8 enrollment, followed by just BHS enrollment:



Blue: Actual, Orange: Projected without new development, Green: projection with new Development, x-axis is School Year, y-axis is number of students

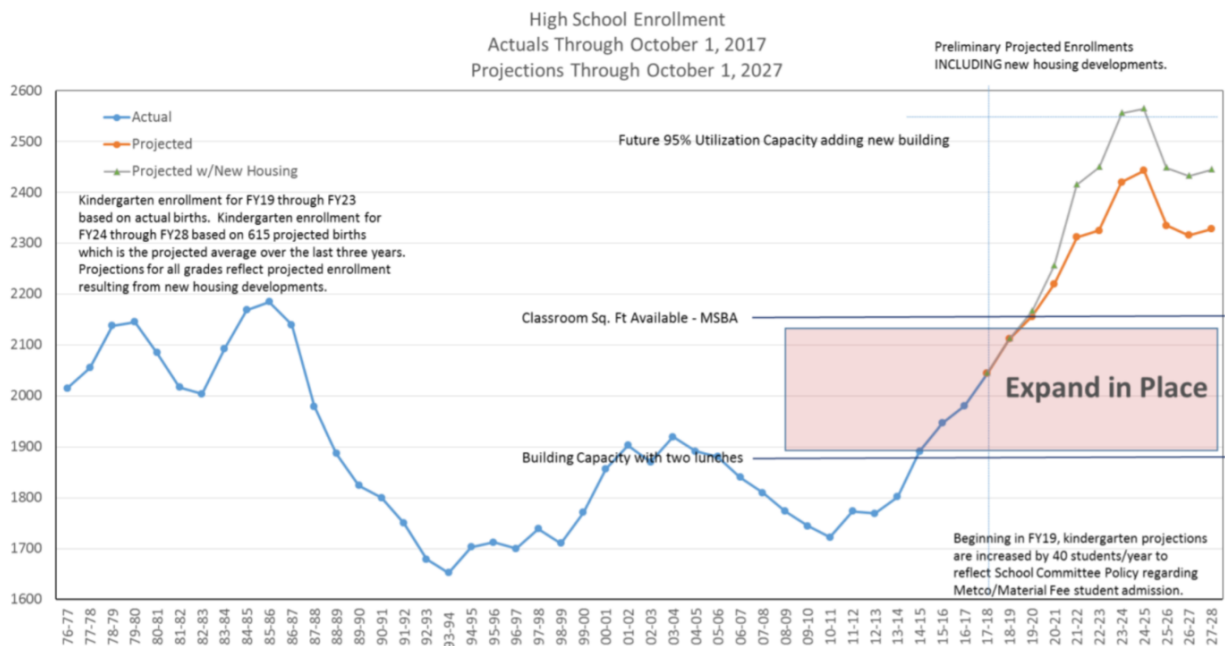


- Projections do not include: condo/t-zone conversions or students displaced by the current Hancock Village unit renovations.
- “Expand in Place” represents the capacity increases resulting in the work done since 2008 enumerated above



Blue: Actual, Orange: Projected without new development, Green: projection with new Development, x-axis is School Year, y-axis is number of students

- Projections do not include: condo/t-zone conversions or students displaced by the current Hancock Village unit renovations.
- “Expand in Place” represents the capacity increases resulting in the work done since 2008 enumerated above



Blue: Actual, Orange: Projected without new development, Green: projection with new Development, x-axis is School Year, y-axis is number of students

- Projections do not include: condo/t-zone conversions or students displaced by the current Hancock Village unit renovations.
- “Expand in Place” represents the capacity increases resulting in the work done since 2008 enumerated above
- Notice the high enrollment growth from the elementary schools starting in School Year 2008-2009 starting to greatly increase BHS enrollment in School Year 2014-2015
- The “Future 95% Utilization Capacity adding new building” line refers to the current BHS expansion plans that would increase the total capacity of BHS to 2700, resulting in a 2565 95% utilization capacity, an increase of 500 students from current enrollment.

In conclusion, as stated above, the fact remains that enrollment continues to increase showing no signs of reversing.

### *Ratios of Faculty to Students*

Tax revenue increases at 3.0 to 3.5% a year depending on the amount of new construction and changes in assessments. That revenue is split between the Town’s operating budget and the Schools. As enrollment rose during the 2000’s, a gap developed between the amount of revenue available to the Schools and the

costs of maintaining the ratio of students to professional staff. The School Committee opted to maintain the ratio of students to classroom teachers, and it reduced the ratio of students to other professionals, including nurses, ELL teachers, and guidance staff.

The 2015 override included funds to bring those ratios back up to the levels identified as appropriate by the School Committee. For the 2015-16 school year, the Schools added **XX** non-classroom professional staff and restored the student-to-professional ratios for the services that had seen an adverse change in ratio.

Now, in 2018, the sea level increase that the Schools are facing has moved further up the beach, as each incoming class of kindergarten students exceeds the graduating class of high school seniors by 175 to 200 students (excepting FY18, as noted above). It is clear that the enrollment increases projected for the next few years will require more classroom teachers.

In addition, the Schools will not be able to maintain the desired ratios of students to non-classroom professionals unless funding for both classroom staff and non-classroom professionals is provided in an FY 2019-21 override.

One important question is whether the ratios adopted by the School Committee are appropriate. For example, the National Association of School Nurses recommended the following ratios in 2011:

School Population	Recommended Ratio
Healthy school populations	1:750
Student populations requiring daily professional nursing services	1:225
Student populations with complex healthcare needs	1:125
individual students requiring daily, continuous professional nursing services	1:1

Several states recommend overall ratios of 1:750, and that ratio was included in *Healthy People 2020* (U.S. Department of Health and Human Services [USDHHS], 2014a). As a practical matter, the NASN estimates that one on four children today come to school with some sort of chronic medical condition, and the Association contends that the 1:750 standard is not appropriate for a typical student population.

Instead of a fixed ratio, NASN recommends an assessment of each district's population based on the following:

- Health behaviors, health condition and disease prevalence, immunization levels;
- Socioeconomic status, employment, education level;
- Housing status, food security, transportation access;
- Social and cultural supports and influences, discrimination;
- Access to healthcare, health insurance, and social services;
- Environmental stresses; and
- Language and communication barriers.

Brookline's actual and (notional) future ratios of students to nurses are:

<b>Budget Year</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY 21</b>
Medical Services FTEs	15.06	15.06	16.76	17.2 (derived)
Total enrollment (01/2017 report)	7411	7417	7526 (12/31/17)	7740 (proj.)
Nurse to student ratio	1:492	1:492	1:447	1:450 (proj.)

We cannot judge whether a ratio of one nurse to 450 (or 447) students is the “right” ratio, but considering that Brookline’s approximately 10 percent of Brookline’s students have IEPs and another group have Section 504 eligibility, a ratio of 1:750 is not appropriate.

A similar table could be constructed for other non-classroom professionals, including ELL instructors and guidance counselors. In each case, the Override Study Committee does not have a point of view on what the appropriate ratios are. But in general, each FTE adds about \$80,000 to the budget (when benefits are included). The cost of retaining the nursing, guidance and ELL specialist ratios at their FY18 levels are summarized below:

<b>Program</b>	<b>FY18 ratio</b>	<b>FY18 FTEs</b>	<b>FY21 FTEs (est.)</b>
Medical Services	1:447	16.76	17.2
Guidance	1:218	34.3	35.5
ELL	1:252	29.7	30.7
Incremental cost vs. FY 18 per PSB	\$204,080	\$204,080	\$212,242

#### *Additional Staff Needs Due to Capital Growth*

Adding supply in the form of opening new schools comes with additional costs both in personnel and non-personnel categories. The Public Schools of Brookline have put together the following estimates to give some idea of that those costs would be:

New Elementary School				Expanded Brookline High School		
Preliminary Estimate				(Rates as of End of Contract Year)		
OPERATING EXPENSES				700 Student Building		
Title	FTE	Salary	Total	FTE	Salary	Total
Principal	1.00	\$ 143,263	\$ 143,263	-	\$ 143,263	\$ -
Vice-Principal/Dean	1.00	\$ 83,942	\$ 83,942	2.00	\$ 103,442	\$ 206,883
Secretary (GR7-5)	1.00	\$ 60,466	\$ 60,466	1.00	\$ 60,466	\$ 60,466
Senior Clerk (GR4-5)	1.00	\$ 39,415	\$ 39,415	1.00	\$ 39,415	\$ 39,415
Building Aide	1.00	\$ 40,000	\$ 40,000	1.00	\$ 40,000	\$ 40,000
NU Aide	-	\$ 15,000	\$ -	-	\$ 15,000	\$ -
Nurse (M-5)	1.42	\$ 70,701	\$ 100,325	1.00	\$ 70,701	\$ 70,701
Guidance (M-5)	2.58	\$ 70,701	\$ 182,409	1.00	\$ 70,701	\$ 70,701
Library (M-5)	1.29	\$ 70,701	\$ 91,204	0.50	\$ 70,701	\$ 35,351
Tech	1.50	\$ 70,000	\$ 105,000	1.50	\$ 70,000	\$ 105,000
Custodial	3.00	\$ 50,000	\$ 150,000	2.00	\$ 50,000	\$ 100,000
Food Svcs	1.60	\$ 30,000	\$ 48,000	1.60	\$ 30,000	\$ 48,000
Sub-Total Salaries	16.39		\$ 1,044,023	12.60		\$ 776,517
Benefits (@35%)			\$ 365,408			\$ 271,781
Total Personnel Costs			\$ 1,409,431			\$ 1,048,298
Repair & Maint			\$ 75,000			TBD
Utilities			\$ 120,000			TBD
Transportation per bus			\$ 80,000			\$ 80,000
Operation Supplies & Materials			\$ 322,500			\$ 140,000
Sub-Total Non-Personnel			\$ 597,500			\$ 220,000
GRAND TOTAL			\$ 2,006,931			\$ 1,268,298

### *Brookline High School Expansion*

Over the past decade, the Brookline Schools have experienced a significant increase in kindergarten - eighth grade enrollment. Now those student cohorts are arriving in the 9<sup>th</sup> grade at Brookline High School (BHS). The BHS student population has grown by 250 since 2007 to 2,065 in 2017. The classes entering 9<sup>th</sup> grade going forward have 600 plus students, while 500 students are graduating, adding 100 students per year. The anticipated enrollment of 2400-2500 is straining capacity in a school intended for 1,800. As of 2017, all non-BHS direct education functions such as Adult Education have been moved out of the building. With this background, there is now a proposal for expansion at BHS.

In November 2016, HMFH Architects, who designed the new/renovated Devotion School, were hired to conduct a feasibility study for BHS expansion. A campus expansion concept was accepted. In the fall 2017, the architecture firm William Rawn Assoc. was hired to prepare a schematic design for a “ninth grade academy” at 111 Cypress Street; a new STEM science & technology wing to be attached to the existing BHS building along Tappan Street; and renovations to the Tappan Gym. In November 2017, Town Meeting authorized the Select Board to acquire the property at 111 Cypress Street for BHS expansion.

The current schematic design envisions an integrated campus with 9<sup>th</sup> grade classrooms, AP science classrooms, a cafeteria, library and large meeting room at 111 Cypress. Foreign language, arts and health classes will be in other BHS buildings. The goal is to have an agreement with the MBTA that will allow the building to bridge over the Green Line tracks linking the building to the main campus. The new Tappan Street wing will replace existing science classrooms, which will be renovated for general use. The Tappan Gym is to be renovated to accommodate expanded health and fitness classrooms.

A schematic design project cost estimate is to be presented to the Building Committee on Feb. 7, 2018. Preliminary total cost estimates, including acquisition of 111 Cypress Street, range from \$200 - \$225 million. The Schematic Design is scheduled to be final by April 2018. The overall project includes:

- Build 120,000 sq.ft. of space 111 Cypress Street
  - Up to 700 9th grade students
  - AP Science (Physics) classrooms
  - Special Ed. /Early Ed (BEEP)
  - Cafeteria
  - Library
  - Large meeting space
- Build 75,000 sq.ft. for a new STEM/tech wing along Tappan St.
- Renovate 25,000 sq.ft. at Tappan Gym for health & fitness
- Renovate 33,500 sq.ft. of existing former science classrooms
- Restoration to Cypress Field after construction

Given that the language of a debt exclusion override allows the Town to authorize excluding debt service from the Proposition 2-1/2 levy limit before the actual borrowing for a capital project begins, we may not know the final amount until after the decision is made to put the ballot before the voters.

Since there is already a budgeted amount of \$35 million in the Capital Improvements Program, override borrowing would most likely occur in FY20. At that time, the addition to the levy would appear in the property tax bill.

#### High School Expansion Operating Budget Implications

While a final building design was not available for the Override Study Committee to consider prior to the delivery of its report, a portion of the operating budget implications of an expanded, and partially renovated, high school were made clear to the committee.

Due to the lack of finality about building design, the committee was unable to determine the marginal increase in utility and building operations costs that will result from a larger high school footprint. Assumptions have been made about increased energy costs and about the need for additional building maintenance, and these assumptions form the partial basis for the request for an increase in the building services appropriation carried in the school's budget.

The Override Study Committee was able to have a detailed conversation about increased personnel expenses connected to the expanded high school. The need for additional high school staff is solely a function of increased enrollment and not due to building design. The personnel expenses will come in two waves: pre- and post-opening at 111Cypress. With that important caveat, when fully brought online the expanded high school will require an additional 12.60 FTEs. These additional FTEs are expected to add \$1.04 million to the operating budget (this figure includes both salaries and benefits).

The full \$1.04 million increase in personnel costs has not been included in the operating override recommendation of the 2017 Override Study Committee. The expanded high school is not expected to become fully operational until after the three-year time period covered by the recommended override.

The 2017 Committee recommendation contains funding for 4.00 FTEs - \$264,000 dollars in salary and benefit expenses - that the School Department has identified as needed immediately to deal with increased enrollment. (Please see appendix X for the details.)

Pre-Ninth Grade Academy Opening Positions:

Title	FTE	Salary	Total
Vice Principal/Dean	1	\$103,442	\$103,442
Secretary	1	\$60,466	\$60,466
Custodial	2	\$50,000	\$100,000

The funding for the remaining 8.6 FTEs - \$784,298 in salary and benefits - that are projected to be necessary to operate an expanded high school has not been identified. It is the Override Study Committee's assumption that the expense associated with additional staff will be funded either through the School Department's existing appropriation at the time hiring takes place or through a future operating override.

Between September 2017 and April 2018, the Building Committee for the Expansion of Brookline High School will work with William Rawn Associates and Hill Associates on design development, gathering staff and public input on design options, and finalizing cost estimates. There are four primary stages during this phase:

Stage	Primary Tasks	Dates
Schematic Design Phase Launch & Program Verification	<ul style="list-style-type: none"> <li>Review and update Educational Plan and Space Summary completed during Feasibility Phase</li> <li>Architects meet with BHS staff and students to better understand programming needs and priorities</li> <li>Revise massing options for Cypress Street Building and Tappan Street Building</li> <li>Begin work with MBTA on possible construction over MBTA right of way</li> </ul>	September 2017 - October 2017
Schematic Design Development and Review	<ul style="list-style-type: none"> <li>Development of designs for Cypress Street and Tappan Street Buildings and renovation of existing science wing including classroom layout, floor plans, exterior facades, and technical systems</li> <li>Design review and input by Building Committee</li> <li>Ongoing input from BHS staff and students and public meetings on design development</li> </ul>	October 2017 - January 2018
Final Schematic Design Development and Cost Estimates	<ul style="list-style-type: none"> <li>Cost estimates developed as designs are finalized</li> </ul>	February 2018
Final Approval of Schematic Design	<ul style="list-style-type: none"> <li>BHS Building Committee votes on final approval of schematic design in preparation of the School Committee, Board of Selectmen, Building Commission, Advisory Board and Town Meeting considering the design and/or funding of the project</li> </ul>	March 2018 - April 2018

Table: Anticipated Timeline

### Related Projects

In addition to the expansion of the Brookline High School academic buildings, the town is also considering renovations to the Tappan Gym and Cypress Field and will be reviewing parking and traffic in the neighborhood. Please see below for details about which town department or commission is managing these related projects.

Related Project	Town Board or Commission Leading the Project	Anticipated Timeline
Acquiring 111 Cypress Street for BHS Expansion	Board of Selectmen	September/October 2017: <ul style="list-style-type: none"> <li>Outreach efforts with MBTA are currently underway</li> <li>Hard yes or no decision by end of October</li> </ul> November/December 2017: <ul style="list-style-type: none"> <li>Town Meeting votes on two Warrant Articles related to acquisition</li> </ul>
Tappan Gym Renovation	BHS Building Committee	TBD
Cypress Field Improvements	Parks and Recreation Commission	TBD
Traffic and Parking	Transportation Board	TBD



### *Faculty Turnover Savings*

Every year there are 70 to 100 employees who make decisions to leave the district for reasons that include retirement, promotion, or other life changes. These employee departures generate savings due to hiring people at a lower rate than their experienced predecessor. Therefore an amount is deducted from the projection as well as from the general operating budget request annually.

Brookline has an increasing proportion of educators and employees with fewer years of experience, leading to fewer retirements and increasing costs as educators get steps added to their salaries.

The FY 2019 override budget uses a practice of applying a salary differential, attrition, or turnover savings to reduce the total cost of personnel funding. The practice estimates a savings due to employee turnover (resignation, retirement, termination, or reduction in force). The offset used this year is \$675,000. In a normal budget year the amount should be \$500,000 and \$150,000 respectively.

Based on the estimates and actual savings from the last two years, we agree that \$670,000 is a reasonable estimate.

### *Collective Bargaining Agreements: 2% COLA & 3% Steps*

Student enrollment in Brookline elementary schools has increased more than 30% since 2006, which has put historic burdens on the budget and in the classrooms alike. The growth in student population continues to put pressure on the entire educational system. Despite passage of a substantial three-year tax override in 2015, because of ongoing enrollment increases, there continues to be a deficit. As the 2014 OSC reflected, the need for increased staffing to meet the growing enrollment numbers has led to an increase in personnel costs—collective bargaining salary increases for teachers, and the “steps and lanes” pay structure.

In Brookline, if a contract expires with no new contract, the terms of the final year of the expiring contract will hold for the next year until a new contract is negotiated. Once a new contract is negotiated, any changes will be retroactive at that time. If a new contract is not reached within the next year, the same process will hold for the following year and so on until a new contract is reached.

After several years of negotiations, the Town, School Committee and Brookline Educators Union settled new contracts in 2017. All contracts expire August 31, 2019 (except for AFSMI which expires in June 2018).

The Brookline School Groups are:

- 1) Unit A (Teachers)
- 2) Unit B (some administrators)
- 3) Paras
- 4) AFSMI (Custodians, Food Service, and Secretaries)
- 5) “Non-aligned” (some other administrators, employees at will, others).

Base assumptions regarding Collective Bargaining:

- COLA (Cost of Living Adjustment) of 2% per year
- Steps (Collective Bargaining Agreements of CBA) Average 3% on the base when netting out people who are traveling through the steps with the ones that have reached the top step

The 2014 OSC Report recommended that annual compensation and benefits increase at a rate considered sustainable over time, not exceeding revenue limitations imposed by proposition 2½ and State Aid. Within the restrictions associated with Proposition 2 ½, the ability to fund the collectively bargained salaries is unsustainable given the growth in the number of teachers required to serve the increasing student population.

This continues to be the case today in 2018. The biggest drivers of cost increases in contracts are the increasing number of teachers (due to enrollment growth), cost of living (COLA) increases and steps and lane increases.

The OSC recommends \$3.5 million (57%) of the proposed FY 2019 budget increase to pay for the contractually obligated future salary increases of the educators already employed by the Public Schools of Brookline.

FY18 Budget - existing staff:	\$ 94,296,072
FY19 Budget with step and lane increases of existing staff:	\$ 97,802,963
<hr/>	
Increase needed to pay for contractual salary obligations	\$3,717,074
Reclassifications & Consolidations	<u>\$ (210,183)</u>
FY 19 Budget Request:	\$ 3,506,891
	57% of \$6.1 million increase

#### *Impact of Maintaining Current Ratios of Non-Classroom Professional Staff*

Tax revenue increases at 3.0 to 3.5% a year depending on the amount of new construction and changes in assessments. That revenue is split between the Town's operating budget and the Schools. As enrollment rose during the 2000's, a gap developed between the amount of revenue available to the Schools and the costs of maintaining the ratio of students to professional staff. The School Committee opted to maintain the ratio of students to classroom teachers, and it reduced the ratio of students to other professionals, including nurses, ELL teachers, and guidance staff.

The 2015 override included funds to bring those ratios back up to the levels identified as appropriate by the School Committee. For the 2015-16 school year, the Schools added XX non-classroom professional staff and restored the student-to-professional ratios for the services that had seen an adverse change in ratio.

Now, in 2018, the sea level increase that the Schools are facing has moved further up the beach, as each incoming class of kindergarten students exceeds the graduating class of high school seniors by 175 to 200 students (excepting FY18, as noted above). It is clear that the enrollment increases projected for the next few years will require more classroom teachers.

In addition, the Schools will not be able to maintain the desired ratios of students to non-classroom professionals unless funding for both classroom staff and non-classroom professionals is provided in an FY 2019-21 override.

One important question is whether the ratios adopted by the School Committee are appropriate. For example, the National Association of School Nurses recommended the following ratios in 2011:

School Population	Recommended Ratio
Healthy school populations	1:750
Student populations requiring daily professional nursing services	1:225
Student populations with complex healthcare needs	1:125
individual students requiring daily, continuous professional nursing services	1:1

Several states recommend overall ratios of 1:750, and that ratio was included in Healthy People 2020 (U.S. Department of Health and Human Services [USDHHS], 2014a). As a practical matter, the NASN estimates that one on four children today come to school with some sort of chronic medical condition, and the Association contends that the 1:750 standard is not appropriate for a typical student population.

Instead of a fixed ratio, NASN recommends an assessment of each district's population based on the following:

- Health behaviors, health condition and disease prevalence, immunization levels;
- Socioeconomic status, employment, education level;
- Housing status, food security, transportation access;
- Social and cultural supports and influences, discrimination;
- Access to healthcare, health insurance, and social services;
- Environmental stresses; and
- Language and communication barriers.

In essence, Brookline follows this guideline. The actual ratio of ~ 1:450 for medical services staff is based on the Mass Dept. of Public Health's recommended ratio of 1:500<sup>5</sup>, plus an adjustment upwards for the number of medically involved students and their needs be they in a range of medication administration, diabetes management, or more involved medical supports.

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<sup>5</sup> See <http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/primarycare-healthaccess/school-health/>

Brookline's actual and (notional) future ratios of students to nurses are:

<b>Budget Year</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY 21</b>
Medical Services FTEs	15.06	15.06	16.76	17.2 (derived)
Total enrollment (01/2017 report)	7411	7417	7526 (12/31/17)	7740 (proj.)
Nurse to student ratio	1:492	1:492	1:447	1:450 (proj.)

Considering that Brookline's approximately 10 percent of Brookline's students have IEPs and another group have Section 504 eligibility, a ratio of 1:750 is not appropriate. The 1:450 ratio Brookline uses seems reasonable, give the State's 1:500 baseline recommendation and the fact that an adjustment has been made by considering the actual mix of students in the district and their medical needs.

A similar table could be constructed for other non-classroom professionals, including ELL instructors and guidance counselors. In each case, the Override Study Committee does not have a point of view on what the appropriate ratios are. But in general, each FTE adds about \$80,000 to the budget (when benefits are included). The cost of retaining the nursing, guidance and ELL specialist ratios at their FY18 levels are summarized below:

<b>Program</b>	<b>FY18 ratio</b>	<b>FY18 FTEs</b>	<b>FY21 FTEs (est.)</b>
Medical Services	1:447	16.76	17.2
Guidance	1:218	34.3	35.5
ELL	1:252	29.7	30.7
Incremental cost vs. FY 18 per PSB	\$204,080	\$204,080	\$212,242

### *METCO & Materials Fee Program*

#### **METCO**

The School Committee recently reaffirmed its commitment to hosting a total of 300 METCO students. The circumstances around METCO have not changed substantially since the 2014 OSC report, but we believe it is important to provide a clear picture of the program's costs, both in the aggregate and for typical residential taxpayers. The same imperative applies to explaining the cost of the Materials Fee program.

The School Committee's position is that those METCO students are important not just because of the educational value offered to Boston students, but also because it significantly increases diversity in Brookline's schools. Beyond that, given the current national political climate, the OSC would view any reduction in METCO as being not just educationally but also socially unacceptable.

METCO (Metropolitan Council for Educational Opportunity) brings a total of 300 students to Brookline from Boston. METCO enrollment has remained static while enrollment has grown, so some classrooms do not include a METCO student. The METCO program was initiated in 1966 in response to *de facto* school segregation in Boston. Brookline was one of seven communities to join the program at its inception. Currently there are 33 participating school districts in the greater Boston area, and another four districts in the Connecticut River valley region accept students from Springfield. In FY 2016, state data showed that 3262 students were enrolled statewide, including 112 in Western Mass., so Brookline accepts slightly less than 10% of the total number of Boston students who are in the METCO program.

State data for FY 18 shows that Brookline received \$1,509,872 in grants and reimbursements for METCO including \$315,884 for transportation, leaving \$1,193,998 to offset the direct costs of education, or \$3,980 per student. This level of reimbursement is far below the \$15,000 “long term incremental cost per student” estimated by the 2015 Override Study Committee. One could re-work or challenge that number, but given the rigorous effort the 2014 OSC made we have used it in our calculations.

It is important to note that state grants for METCO students are less than 40% of the amount the state provides to cover the tuition of Boston students who attend a charter school. Those reimbursements are governed by the School Choice law.

METCO’s agreement with Brookline provides that Brookline can accept students on a space-available basis. PSB’s administration states that METCO students are not assigned to classrooms that have more than the target number of students for a particular grade level. Nonetheless, there are 300 classroom seats in Brookline occupied by METCO students.

### (1) Materials Fee

The Materials Fee program began in 1987-88 (FY88). The program accepts the children of non-resident PSB employees and, depending on space availability, the children of non-resident Town employees. Parents are charged an annual fee of \$2,888, an amount that equals 19.25% of the long term incremental cost of education (per the 2014 OSC report). Tuition has been raised by 3% each year. The total number of materials fee students is shown below:

FY	Number of Applicants	Number Accepted	% Accepted	# in K-8	# in BHS	Total # Enrolled	School Staff	Town Staff
13	28	28	100%	136	32	168	130	38
14	29	26	100%	144	34	178	138	40
15	37	33	100%	162	40	202	154	48
16	35	21	60%	146	46	192	154	38
17	31	15	49%	133	49	182	148	34
18	54	38	71%*	151	51	202	167	35

\* Ten applicants withdrew; 6 were denied entry

Source: PSB data

The assumption behind the Materials Fee program is that parents employed by PSB or in Town hall would prefer to have their children educated near where they work, and that the program is an attractive fringe benefit that improved Brookline's ability to recruit highly qualified employees. Nonetheless, at the current tuition level, the net cost of educating each child adds more than \$12,000 to the effective cost of employing of non-resident staff whose children attend Brookline schools, assuming one child per employee. An employee with two children is receiving a benefit of ~ 24,000.

As with METCO, PSB states that students are assigned to classrooms in a way that minimizes the impact on target class sizes.

### Cost Summary

The following table summarizes the net incremental cost per student and the impact on residential tax bills. Note that the impact on tax bills is slightly overstated, since the calculation does not account for the portion of tax revenue paid by commercial property owners.

Program	# of students	Incremental cost per 2015 OSC	Offsetting grants & fees, FY18*	Net incremental cost	Net program cost	% of total tax revenue	Impact on \$10,000 tax bill
METCO	300	\$ 15,000	\$ 5,033	\$ 9,967	\$ 2,990,128	1.4%	\$ 142
Mat'ls Fee	200	\$ 15,000	\$ 2,888	\$ 12,112	\$ 2,422,400	1.1%	\$ 115
					\$ 5,412,528	2.6%	\$ 256
* For METCO, data includes transportation reimbursement of \$315,884							

Note that the out-of district special needs costs associated with METCO and Materials Fee students are covered by the school districts in which they reside, not by the host community. In-district program costs are covered by Brookline.

## (2) Non-resident International Students

The Schools host approximately 65 international students each year, most of whom are residents. A small number remain non-residents and pay tuition at a level that approximates the actual average cost per student.

## (3) Recommendations

We strongly recommend that the Town and the School Committee initiate an effort to organize the other 36 METCO communities to lobby the Legislature for a change in METCO reimbursement. METCO students should be eligible for the same formula as is used for students who opt for charter schools. This shift would be far more equitable for METCO communities and it might encourage some of them to expand their METCO enrollments, possibly in competition with charter schools. Brookline is a member of the Mass. Municipal Association and EDCO, and both associations should be enlisted in this effort.

With regard to the Materials Fee program, the School Committee should increase the tuition for Materials Fee students to at least keep up with the increase in the overall budget. Another option for the School Committee to consider is to suspend offering new non-resident Town employees admission to Brookline schools until such time as additional classrooms become available across all grades. Children from families currently in the program would continue to be eligible. At such time as additional classroom space is available, it would be appropriate to assess whether the Town's ability to recruit staff had been adversely affected by suspension of the program.

Beyond lobbying, we recommend that the Schools review the state laws and regulations related to school choice. Under the law, districts that accept out-of-district students are compensated using the school choice tuition formula. That formula provides approximately \$12,000 per student. The law allows districts to accept out-district students on a space available basis. There are important questions to be answered as to the impact of making this change, but it could potentially add \$2.4 million in funding for the Schools. We understand that PSB is investigating this potential.

## Tax Impacts in FY19

Impact of Debt Exclusions and Operating Overrides, assuming level payment over 25 years for debt exclusions.

Beginning Data Points for FY2018								
Tax Levy (in dollars)		211,374,488						
Median Tax Bill (in dollars)								
Single-Family w. Residential Exemption		11,533						
Condo wi. Residential Exemption		4,652						
Condo without Res. Exemption		5,500						
Apt. Building, per unit, no Res. Exempt.		2,783						
Impact of Override (For alternative scenarios, change the numbers in the cells with bold print.)	Debt Exclusion Devotion	Debt Exclusion 111 Cyp. St.	Debt Exclusion New H.S.	Total Debt Exclusion Excl. Dev.	Total Debt Exclusion Incl. Dev.	Operating Override	Total Debt&Oper. Excl. Dev.	Total Debt&Oper. Incl. Dev.
<b>\$ Amount</b>	<b>49,576,000</b>	<b>16,400,000</b>	<b>165,000,000</b>	181,400,000	230,976,000	<b>7,142,097</b>		
<b>Interest Rate</b>	<b>5.0%</b>	5.0%	5.0%	5.0%				
Addition to Levy	3,517,539	1,163,620	11,707,155	\$12,870,776	\$16,388,315	7,142,097	20,012,873	23,530,412
% added to levy and to tax bills	1.66%	0.55%	5.54%	6.09%	7.75%	3.38%	9.47%	11.13%
Dollar Increase of Med. Tax Bill								
Single Family with Res. Exemp.	\$191.92	\$63.49	\$638.76	\$702.25	\$894.18	\$389.69	\$1,091.94	1,284
Condo with Res. Exemp.	\$77.42	\$25.61	\$257.65	\$283.26	\$360.68	\$157.19	\$440.45	518
Condo without Res. Exem.	\$91.53	\$30.28	\$304.62	\$334.90	\$426.43	\$185.84	\$520.74	612
Apt. per unit without Res. Exempt.	\$46.31	\$15.32	\$154.14	\$169.46	\$215.77	\$94.03	\$263.49	310
<b>Interest Rate</b>	<b>3.0%</b>	3.0%	3.0%	3.0%				
Addition to Levy	2,847,044	941,817	9,475,599	\$10,417,416	\$13,264,460	7,142,097	17,559,513	20,406,557
% added to levy and to tax bills	1.35%	0.45%	4.48%	4.93%	6.28%	3.38%	8.31%	9.65%
Dollar Increase of Med. Tax Bill								
Single Family with Res. Exemp.	\$155.34	\$51.39	\$517.01	\$568.39	\$723.73	\$389.69	\$958.08	1,113
Condo with Res. Exemp.	\$62.66	\$20.73	\$208.54	\$229.27	\$291.93	\$157.19	\$386.46	449
Condo without Res. Exem.	\$74.08	\$24.51	\$246.56	\$271.06	\$345.14	\$185.84	\$456.90	531
Apt. per unit without Res. Exempt.	\$37.48	\$12.40	\$124.76	\$137.16	\$174.64	\$94.03	\$231.19	269
All of the above will be reduced by 0.45% due to completion of a prior debt exclusion in FY2020.						H. Petersen 2/5/18		